



NORTHWEST ARKANSAS REGIONAL PLANNING COMMISSION 2045 METROPOLITAN TRANSPORTATION PLAN

Prepared by the Northwest Arkansas Regional Planning Commission in cooperation with the Arkansas Department of Transportation, Missouri Department of Transportation, Federal Highway Administration and Federal Transit Administration

Adopted March 24, 2021



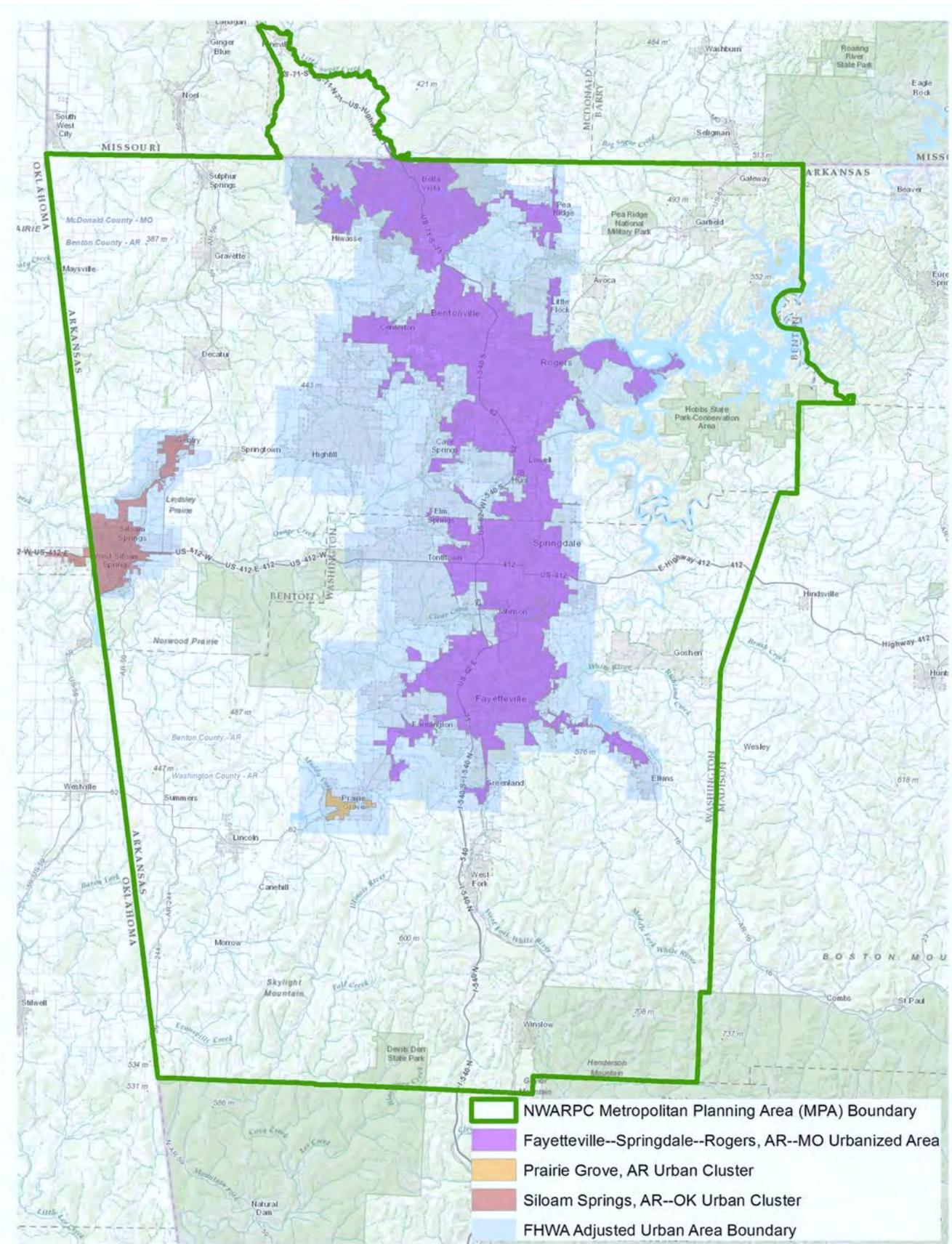
NORTHWEST ARKANSAS REGIONAL PLANNING COMMISSION

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- NWARPC Metropolitan Planning Area (MPA) Boundary
- Fayetteville--Springdale--Rogers, AR--MO Urbanized Area
- Prairie Grove, AR Urban Cluster
- Siloam Springs, AR--OK Urban Cluster
- FHWA Adjusted Urban Area Boundary

METROPOLITAN PLANNING AREA BOUNDARY

NARTS MISSION AND GOAL

The mission of the Northwest Arkansas Regional Transportation Study (NARTS) is to develop and maintain a metropolitan transportation plan for the Metropolitan Planning Area (MPA).

The metropolitan transportation plan goal is to provide a comprehensive multi-modal transportation system which most efficiently serves the human and economic needs of the metropolitan area and the Northwest Arkansas region.

LOCAL AUTHORITY

This plan was developed to provide a regional transportation plan for Northwest Arkansas. Part of the plan includes recommendations for transportation improvements and infrastructure. Local development requirements and transportation decisions will be the responsibility of the applicable governing authority.

PUBLIC PARTICIPATION PLAN (PPP) PROCEDURE

The NWARPC 2045 MTP was developed using the procedures outlined in Chapter X. of the Public Participation Plan (see 2045 MTP Chapter 4 Public Involvement and Input for more details). Due to the ongoing Covid-19 health emergency and pandemic, all public events between March 2020 and March 2021 were conducted virtually.

The Draft MTP was presented virtually to the Technical Advisory Committee and the public on December 17, 2020.

A legal notice was published in the Democrat Gazette on January 10, 2021 announcing the Final Public Forum/Open House, the Public Comment Period and how to comment, and the TAC and NWARPC/Policy Committee meetings where the Draft MTP would be discussed. The same legal notice was published in the La Prensa Libre and the McDonald County, MO Press on January 14, 2021. A Display Ad was published on January 17, 2021 in the Democrat Gazette containing the same information. Flyers were placed on public transit buses announcing the Draft MTP virtual Final Public Forum/Open House and the Public Comment Period, and how to comment. Emails were sent to all interested parties, and a notice was posted on social media and the NWARPC web site.

The TAC met virtually on January 21, 2021 and recommended the Draft MTP to the NWARPC/Policy Committee for consideration at its next meeting.

A Final Public Forum/Open House was held virtually during the NWARPC/Policy Committee on January 27, 2021. The NWARPC/Policy Committee approved the Draft MTP to go a Public Comment Period.

A 30-day Public Comment Period was held from January 28, 2021 through February 28, 2021. A Public Comment Report was developed and supplied to the TAC and NWARPC/Policy Committee. ARDOT and MoDOT also provided comments. Appropriate comments and suggestions were incorporated into the Draft MTP.

A Legal Notice was published in the Arkansas Democrat Gazette on March 7 and March 14, 2021 announcing virtual TAC and NWARPC/Policy Committee meetings in which each committee would vote on approval of the Draft NWARPC 2045 Metropolitan Transportation Plan. A legal notice containing the same information was published on March 11, 2021 in the La Prensa Libre and the McDonald County, MO Press.

This notice is in accordance with the 2045 NWARPC Metropolitan Transportation Plan, the Moving Ahead for Progress in the 21st Century (MAP-21) Act and Fixing America's Surface Transportation (FAST) Act, in cooperation with local agencies, the Arkansas Department of Transportation, the Missouri Department of Transportation, the Federal Highway Administration, and the Federal Transit Administration. This report was funded in part through grant(s) from the Federal Highway Administration, the Federal Transit Administration, and/or the U.S. Department of Transportation. The views and opinions of the agency expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation.

NORTHWEST ARKANSAS REGIONAL PLANNING COMMISSION NOTICE OF NONDISCRIMINATION POLICY

The Northwest Arkansas Regional Planning Commission (NWARPC) complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore, the NWARPC does not discriminate on the basis of race, sex, color, age, national origin, religion or disability, in the admission, access to and treatment in NWARPC's programs and activities, as well as the NWARPC's hiring or employment practices. Anyone with special communication or accommodation needs may contact Celia Scott-Silkwood at (479) 751-7125 ext.106 or email cscott-silkwood@nwarpc.org. For complaints of alleged discrimination and inquiries regarding the NWARPC's nondiscrimination policies contact Celia Scott-Silkwood, AICP, Regional Planner – EEO/DBE (ADA/504/TitleVI Coordinator), 1311 Clayton, Springdale, AR 72762, (479) 751-7125 ext. 106, (Voice/TTY 7-1-1 or 1-800-285-1131) or the following email address: cscott-silkwood@nwarpc.org. This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille. If information is needed in another language, contact Celia Scott-Silkwood. Si se necesita informacion en otro idioma, comuniquese Celia Scott-Silkwood, cscott-silkwood@nwarpc.org.

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ACRONYMS USED IN THIS PLAN

AADT	Average Annual Daily Traffic
A&M	Arkansas and Missouri Railroad
ACS	American Community Survey
ADA	Americans with Disabilities Act of 1990
ADAAG	Disabilities Act Accessibility Guidelines
ADT	Average Daily Traffic
ALOP	Annual Listing of Obligated Projects
ARDOT	Arkansas Department of Transportation
ASSHTO	American Association of State Highway and Transportation Officials
ATRI	American Transportation Research Institute
BFC	Bicycle Friendly Community
BMP	Best Management Practices
BPR	Bureau of Public Roads
BRT	Bus Rapid Transit
CAP	Connecting Arkansas Program
CI	Congestion Index
COP	Community Outreach Plan
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CMP	Congestion Management Process
CSDC	Census State Data Center
CSS	Context Sensitive Solutions (aka as Context Sensitive Design)
CTTP	Census Transportation Planning Package
DA	Drive Alone
DOT	Department of Transportation
DMVT	Daily Vehicle Miles Traveled
EJ	Environmental Justice
E's (5)	Engineering, Enforcement, Education, Evaluation, Encouragement
EPA	Environmental Protection Agency
FARS	Fatality Analysis Reporting System
FAST ACT	Fixing America's Surface Transportation Act
FFY	Federal Fiscal Year
FHWA	Federal Highway and Transportation Administration
FTA	Federal Transit Administration
GIS	Geographic Information System
HBO	Home-Based Other Trips
HBW	Home-Based-Work Trips
HBSB	Home-Based-Shop/Personal Business Trips
HBSC	Home-Based School Trips
HBU	Home-Based-University/College Trips
HCM	Highway Capacity Manual
HHTS	Household Travel Survey
HSIP	Highway Safety Improvement Program
HTP	Heritage Trail Plan
IPF	Iterative Proportional Fitting
IRP	Interstate Rehabilitation Program
ISTEA	Intermodal Surface Transportation Efficiency Act
ITS	Intelligent Transportation System
KNR	Kiss-and-Ride/drop-off
KSC	Kansas City Southern Railroad
LB	Local bus
LEP	Limited English Proficiency Plan
LOS	Level of Service
LPA	Locally Preferred Alternative
LR	Light Rail
LRP	Long Range Plan
MAP-21	Moving Ahead for Progress in the 21st Century
MODOT	Missouri Department of Transportation
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization

MS4	Municipal Separate Storm Sewer Systems
MSA	Metropolitan Statistical Area
MTP	Metropolitan Transportation Plan
NARTS	Northwest Arkansas Regional Transportation Study
NBI	National Bridge Inventory
NBIS	National Bridge Inspection Standards
NHB	Non-Home-Based Trips
NHBW	Non-Home-Based Work Trips
NHS	National Highway System
NHPP	National Highway Performance Program
NHTS	National Household Travel Survey
NLCD	National Land Cover Database
NTD	National Transit Database
NWA	Northwest Arkansas
NWADG	Northwest Arkansas Democrat Gazette
NWARPC	Northwest Arkansas Regional Planning Commission
ORT	Ozark Regional Transit
PNR	Park-and-Ride
POP	Program of Projects
PPP	Public Participation Plan
PRMSE	Percent Root Mean Square Error
PRT	Personal Rapid Transit
ROW	Right of Way
RMSE	Root Mean Square Error
RPC	Regional Planning Commission
RT	Razorback Transit
RTP	Recreational Trails Program
SAFEEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SH	State Highway
SR2	Shared ride of two
SR3+	Shared ride of three or more
SRTS	Safe Routes to School Program
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
STP-A	Surface Transportation Program – Attributable Funds
STBGP	Surface Transportation Block Grant Program
STBGP-A	Surface Transportation Block Grant Program - Attributable
TAC	Technical Advisory Committee
TAP	Transportation Alternatives Program
TAD	Traffic Analysis Districts
TAZ	Traffic Analysis Zone
TCSP	Transportation, Community, and System Preservation Program
TDM	Transportation Demand Management (aka Mobility Management)
TDP	Transit Development Plan
TIP	Transportation Improvement Plan
TIGER II	Transportation Investment Generating Economic Recovery Grant Program
TLFD	Trip Length Frequency Distributions
TOD	Transit Oriented Development
TMA	Transportation Management Area
TMIP	Travel Model Improvement Program
TRB	Transportation Research Board
TEA-21	Transportation Equity Act for the 21 st Century
UACES	University of Arkansas, Division of Agriculture Cooperative Extension Service
UALR	University of Arkansas at Little Rock
UPWP	Unified Planning Work Program
U.S.DOT	United States Department of Transportation
UZA	Urbanized Area
VDF	Volume Delay Function
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled

RESOLUTION #2021-02

**A RESOLUTION APPROVING THE NORTHWEST ARKANSAS REGIONAL PLANNING COMMISSION
2045 METROPOLITAN TRANSPORTATION PLAN**

WHEREAS, the Northwest Arkansas Regional Planning Commission (NWARPC), as the designated Metropolitan Planning Organization (MPO) for the Fayetteville-Springdale-Rogers, AR-MO urbanized area, is responsible for the development of a long-range, multi-modal transportation plan for the area and its future environs; and

WHEREAS, said plan must be kept up-to-date on a continuing basis; be updated at least every five (5) years; and have a planning horizon of at least 20 years; and

WHEREAS, after extensive public input and involvement, and multi-jurisdictional and modal agency input, an update of the 2040 plan is ready for Commission approval consideration.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE NORTHWEST ARKANSAS REGIONAL PLANNING COMMISSION/POLICY COMMITTEE:

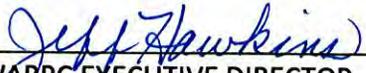
THAT the Northwest Arkansas Regional Planning Commission 2045 Metropolitan Transportation Plan be, and is hereby, approved.

PASSED AND APPROVED THIS 24 DAY OF MARCH, 2021.



NWARPC CHAIR, MAYOR CHRIS KEENEY

ATTEST:



NWARPC EXECUTIVE DIRECTOR
JEFF HAWKINS

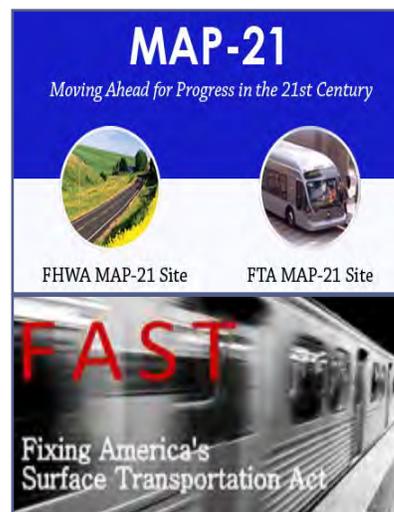


CHAPTER 1. INTRODUCTION

OVERVIEW OF TRANSPORTATION LEGISLATION

The Moving Ahead for Progress in the 21st Century (MAP-21) transportation bill was signed into law on July 6, 2012 and was the first long-term highway authorization enacted since 2005. A key feature of MAP-21 was the establishment of a performance- and outcome-based program. The objective of this program was for the metropolitan transportation planning process to provide for the establishment and use of a performance-based approach to transportation decision-making.

President Obama signed the Fixing America’s Surface Transportation (FAST) Act on December 4, 2015, building upon MAP-21. The 2040 NWA Metropolitan Transportation Plan (MTP) was developed under MAP-21/FAST Act guidance.



NATIONAL GOALS AND PERFORMANCE MANAGEMENT MEASURES

MAP-21/FAST Act establishes a national policy in support of performance management and establishes national performance goals for the Federal-aid highway program in seven areas:

GOAL AREA	NATIONAL GOAL
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair.
Congestion reduction	To achieve a significant reduction in congestion on the National Highway System.
System reliability	To improve the efficiency of the surface transportation system.
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment.
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

23 U.S.C. & 150(b)

METROPOLITAN TRANSPORTATION PLANNING FACTORS

MAP-21/FAST Act requires that the metropolitan planning process for a metropolitan planning area shall provide for consideration of projects and strategies that will:

- (A) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- (B) Increase the safety of the transportation system for motorized and nonmotorized users;
- (C) Increase the security of the transportation system for motorized and nonmotorized users;
- (D) Increase the accessibility and mobility of people and for freight;
- (E) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- (F) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- (G) Promote efficient system management and operations;
- (H) Emphasize the preservation of the existing transportation system;

The FAST Act has added two additional planning factors:

- (I) Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
- (J) Enhance travel and tourism.

These factors and the manner in which they have been addressed in the MTP are presented as follows:

(A) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency:

- Infrastructure that supports a high level of service for mobility.
 - 1) Hwy. 412 Northern Bypass (Hwy. 612) – Interstate-type facility will aid in alleviating congestion on Hwy. 71B in Springdale and I-49 by providing a controlled-access highway for freight to by-pass the business corridors of Springdale.
 - 2) Continue the widening of Hwy. 265 from Hwy. 412 (Springdale) to Hwy. 62 (Rogers) – This transportation improvement will provide better north-south movement for freight by adding lanes to an existing federal highway that connects the industrial parks of Fayetteville, Springdale, and Rogers.
 - 3) Airport Access Road will provide more efficient access to the Northwest Arkansas National Airport.
 - 4) I-49 (Hwy. 549) will provide interstate access connecting the region to I-40 to the south and I-49 to the north.
 - 5) Hwy. 112 will provide north-south regional mobility west of I-49 from Fayetteville to Bentonville.

(B) Increase the safety of the transportation system for motorized and non-motorized users; and

(C) Increase the security of the transportation system for motorized and non-motorized users:

- Improvements to traffic signalization/pavement markings.
- Use of cable median barrier systems, rumble strips, and pavement surfaces to reduce fatality and serious injury crash rates on interstates/freeways.
- Use of congestion management techniques, including access management and ITS.
- Bicycle/pedestrian facilities – maintain a regional commitment to bicycle and pedestrian facilities through implementation of the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan.
- Public Transportation – maintain a regional commitment to public transit service.
- Widening of congested arterial roads, and improving the rural county road network.
- Bridge improvements.

(D) Increase the accessibility and mobility for people and freight:

- Airport Access Road.
- Establish a regional arterial network.
- Maintain a regional cohesiveness and unity by requesting Federal funding for these specific corridor projects:
 - 1) Hwy. 412 Northern Bypass
 - 2) I-49 Improvements
 - 3) Hwy. 112 Improvements
 - 4) Hwy. 265 Improvements
- Investigate innovative funding mechanisms.



US 612- the Future US 412

(E) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns:

- Consider environmental factors, both natural and cultural, as transportation projects are developed.
- Bicycle/pedestrian trail and sidewalk improvements in the region.
- Maintain and expand a regional commitment to public transit service.
- Encourage and explore all modes of transit alternatives.
- Design, manage, and operate transportation facilities that improve system reliability and safety for all modes.

(F) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight:

- Establish a regional arterial network, including improving east/west connections and new north/south arterials.
- Airport Access Road.
- Bicycle/pedestrian facilities.
- Public Transportation – support public transit integration and connectivity.
- I-49 improvements, including improvements to interchanges, improvements to existing grade separations, and widening the mainline.
- Utilize ITS technologies to maximize infrastructure efficiency.

(G) Promote efficient system management and operation:

- Signalization improvements.
- Utilize ITS technologies to maximize infrastructure efficiency.
- Improve and expand existing transit services.
- Encourage and explore all modes of transit alternatives.

(H) Emphasize the preservation of the existing transportation system:

- I-49 improvements, including improvements to interchanges, improvements to existing grade separations, and widening the mainline.
- Strong financial commitment to maintenance of existing roadways.
- Maintain public transit busses and facilities.
- Upgrade and maintain existing bridges.
- Improve the rural county road network.

(I) Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and

- Continue implementation of the Cave Springs Karst Conservation Study.
- Continue implementation of the NWA MS4 Requirements and the MS4 Stormwater Compliance Group.

(J) Enhance travel and tourism.

- NWA Razorback Regional Greenway and wayfinding system
- NWA roadway uniform wayfinding system



Hwy. 112 Proposed Improvements

METROPOLITAN PLANNING ORGANIZATION (MPO)

The Northwest Arkansas Regional Planning Commission (NWARPC) was formed in 1966 through a cooperative agreement between Benton County, Washington County, and the cities of Bentonville, Fayetteville, Rogers, Siloam Springs, and Springdale. In 1983, NWARPC was designated as the Metropolitan Planning Organization (MPO) under U.S. DOT regulations for transportation planning purposes. The MPO is designated by the Governor to conduct the Federally mandated 3C (Comprehensive, Continuing and Cooperative) planning process necessary for transportation projects to qualify for Federal transportation funds.

Transportation Management Area (TMA) status was recognized after 2010 Census Bureau data indicated the Fayetteville-Springdale-Rogers, AR-MO Urbanized Area (UZA) had grown from 172,585 in 2000 to 295,083 in 2010. The 200,000-population mark is the threshold for an area to become a TMA. With the new UZA boundary extending into Missouri, the Metropolitan Planning Area (MPA) for transportation planning now extends into McDonald County, Missouri. Today, NWARPC’s membership includes 35 units of government in Benton, Madison, and Washington Counties, Arkansas; McDonald County and Pineville, Missouri; the Arkansas Department of Transportation (ARDOT); the Missouri Department of Transportation (MoDOT). Other members include Ozark Regional Transit Authority, Razorback Transit, the NWA National Airport and Beaver Water District.

A primary planning activity of NWARPC is serving as the MPO and managing TMA functions. The MPO has two permanent committees, the Northwest Arkansas Regional Planning Commission/Policy Committee (RPC/Policy Committee) and the Technical Advisory Committee (TAC). The RPC/Policy Committee is the chief decision-making body for the MPO and consists of the member jurisdictions’ chief elected official and/or other appointed representatives. The TAC develops the technical aspects of plans and reports and makes recommendations to the RPC/Policy Committee. The TAC and RPC/Policy Committee make up the Northwest Arkansas Regional Transportation Study (NARTS).

Three documents are the major NARTS products:

- The Unified Planning Work Program (UPWP)
- The Transportation Improvement Program (TIP)
- The Metropolitan Transportation Plan (MTP)



Hwy. 265

The **UPWP** outlines the MPO’s annual work activities. Each year the TAC and RPC/Policy Committee reviews and approves proposed planning activities to submit to ARDOT, MoDOT and FHWA/FTA for approval for Federal planning funds.

The **TIP** contains all short-term commitments for State and Federal transportation funding in the metro area. Beginning with Federal Fiscal Year (FFY) 2021 this document covers a five-year period (FFY 2021-2024). No Federal expenditures can be made on transportation facilities within the MPA unless they are listed in the TIP. The TIP is a major tool for shaping the region’s transportation infrastructure.

NWARPC prepares the **Metropolitan Transportation Plan (MTP)**, with updates every five years. It is a Federal requirement that the long-range transportation plan cover at least a period of 20 years into the future. This document is in its sixth update, and is titled the NWARPC 2045 NWA Regional Metropolitan Plan. The MPA for the Plan consists of Washington and Benton Counties, and a portion of McDonald County, Missouri, including the towns of Jane and Pineville.

In the years since the last regional transportation plan update the Northwest Arkansas region continues to see a significant amount of growth and development, including a continuing increase in population. With that growth comes many challenges to the area’s transportation system, such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, improving transit service, and protecting the environment. As evidenced by responses to the 2045 MTP Transportation Survey (see Chapter 4), the top two transportation issues identified by respondents were 1) the flow of traffic on streets during peak times of the day (77% were dissatisfied with the flow of traffic at peak times), and 2) the availability of public transit (74% were dissatisfied

with the availability of public transit). As growth and development continues, it is clear that the current transportation system will not be sufficient to accommodate future needs. Consequently, a long-range plan is necessary to effectively integrate citizen and business needs and wants and the circulation system that will efficiently carry them through the region on their various trips.

In 1995, the 2020 Regional Transportation Plan was developed to address transportation planning for our region. The 2025 Regional Transportation Plan was adopted in 2000 as an update of the previous Plan. The 2030 Northwest Arkansas Regional Transportation Plan was developed in 2005. The 2035 Northwest Arkansas Regional Transportation Plan was approved in April 2011. The 2040 MTP was approved in March 2016. The NWARPC 2045 NWA MTP continues the process of addressing the need for appropriate planning to assist in the region's preparation for continued growth. The MTP functions as a framework for continued regional awareness and cooperation between the region's governments.

It is imperative that the MTP is viewed not as the end of a process, but a continuation of a process that must be on-going in its implementation. Now, more than ever, it is important for the governments of Northwest Arkansas to consider transportation issues on a regional basis, and to cooperate in meeting the demands of accelerating growth. The fact that previous plans have been developed and adopted by the RPC/Policy Committee is evidence that area governments are committed to approaching transportation challenges in Northwest Arkansas on a united front.

2045 METROPOLITAN TRANSPORTATION PLAN RECOMMENDATIONS

The TAC and RPC/Policy Committee advanced the following Recommendations as a result of technical evaluation and community input throughout the 2045 MTP update process. Many of the Recommendations/Implementation actions from the 2040 Plan are being carried forward into the 2045 MTP.

- 1. Continue to establish a Regional Arterial Network.**
- 2. Continue the regional goal of promoting parkways/boulevards.**
 - Access Management.
 - Context Sensitive Solutions.
 - Complete Streets.
- 3. Adhere to Cross-Section Guidelines.**
 - The Northwest Arkansas Regional Bicycle and Pedestrian Master Plan offers cross-sections that conform to acceptable AASHTO standards and may be applied within the recommended standard right-of-way and curb-to-curb dimensions for Minor and Collector Streets, and Minor and Major Arterials.
 - The Connect NWA-TDP offers bus stop standards, street cross-sections and guidelines for the application of transit Mobility Hubs.
- 4. Update the 2015 Congestion Management Process.**
 - The NWARPC CMP Report was approved in May 2015. This is the first phase, or step, in the congestion management process. The following outlines the Tasks in the Congestion Management Process:
 - Task 1.** Develop Regional Objectives for CM – Complete.
 - Task 2.** Define CMP Network
 - Task 3.** Develop Multimodal Performance Measures – This involved developing performance measures that will be used to measure congestion on a regional and local scale and should relate and support the regional objectives.
 - Task 4.** Collect Data/Monitor System Performance – Data is collected and analyzed to determine how the transportation system performs. Data collection is on-going and may involve a wide range of data sources and partners.
 - Task 5.** Analyze Congestion Problems and Needs – Using data and analysis techniques, the CMP should address what congestion problems are present or anticipated and what are the sources of unacceptable congestion. The CMP Committee decided the time periods when congestion was the worst (7:00 to 9:00 AM and 4:30 to 6:30 PM); what was congested versus unacceptable; and decided to use the top fifteen percent of the worst

routes as a screening/priority tool for funding for CM mitigation.

Task 6. Identify and Assess Strategies – This involves identifying and assessing potential strategies appropriate to mitigating congestion. Common mitigation categories include: Access Management /Signal Timing/Planned Improvements/Acceptable Delays/Intersection Geometry/Stop Signs/Added Capacity. Some MPOs have established “regional initiatives” to address operation deficiencies such as signal timing.

Task 7. Program and Implement Strategies – These are items that need to be addressed going forward – how and when will solutions be implemented.

Task 8. Evaluate Strategy Effectiveness – What has been learned about implemented strategies? This action may be tied to monitoring system performance under Task 4. It should inform future decision making about the effectiveness of transportation strategies.

- Assessment of implemented strategies including before/after analysis of recent projects such as:
 - Springdale and Rogers Adaptive Signal Control.
 - Hwy. 265 Access Management Plan.
 - I-49 Capacity and Interchange Improvements.
- Increase focus on management and operations of the traffic signals on the CMP network.

5. Update the 2007 ITS Plan and ITS technologies to maximize infrastructure efficiency.

- Work toward implementation of the Regional ITS Architecture and Deployment Plan, with a priority to be dynamic message signs.

6. Examine use of Alternative Traffic Controls.

- Roundabouts: Hwy. 112 and Pleasant Grove Road; Ruppel Road; Gene George Blvd.; N. Futrell Drive and Fulbright Exp. at the Washington Regional Medical Center.
- Single Point Urban Interchanges: I-49 and N. Walton Blvd.; I-49 and S. Walton Blvd.; and I-49 and MLK
- Diverging Diamond Interchange.

7. Begin a regional discussion on electric and self-driving vehicles (cars, buses, trucks), and the impact this technology may have on transportation infrastructure in the future.

- As companies begin to move into the electric car and truck market, with indicators that renewable-powered vehicles will be widely available in the near future, keep abreast of this industry and its impact on transportation and transportation policies.
- Become more knowledgeable about connected/automated and autonomous vehicles, such as how services like driverless vehicles rollout and how soon this will begin to unfold.
- Envision the role that public transit, local buses, active transportation and private cars play in the region. Refer to the Connect NWA-TDP plan for an implementation schedule for public transit improvements.

8. Cities, counties, ARDOT, and MoDOT are encouraged to apply techniques of access management.

- Tri-party access management agreements with a local jurisdiction, State highway department, and NWARPC have proved very successful in the past and should continue to be employed.
- In applying access management, the use of the jurisdiction’s ordinance is preferred, if one exists. If one does not exist, the highway department policy should be adhered to.
- Refer to the Highway 112 Access Management Regional Vision document, which was adopted by the RPC/Policy Committee by Resolution #2019-02, January 23, 2019.

9. Continue funding of the Eastern North-South corridor (Hwy. 265).

- Implement access management strategies as recommended in the ARDOT corridor study.
- Continue to fund recommended phases based on the ARDOT corridor study.

10. Complete the Northwest Arkansas National Airport access road.

- Continue to work with ARDOT, the Federal government and private partners to identify funding opportunities.

11. Explore funding options for bus and fixed guideway service.

- Look into the grant program FTA Ladders of Opportunity Initiative. These funds may be used to modernize and expand transit bus service specifically for the purpose of connecting disadvantaged and low-income individuals, veterans, seniors, youths, and others with local workforce training, employment centers, health

care, and other vital services.

- Encourage local transit agencies to work with major employers in the region to explore opportunities to partner in the funding of commuter transit services.

12. Continue to pursue the Connect NWA-Transit Development Plan recommendations.

- Develop a Regional Transit Framework that takes the shape of customized route and network recommendations built upon the technical analysis and informed by the public engagement process.
- Use key transit corridors that were identified to provide enhanced connectivity and direct routing focused on moving NWA residents in an intuitive, time efficient manner that is not restricted by political boundaries.
- Allocate resources effectively by implementing regional service standards for ongoing operation, expansion and the implementation of transit services.
- Offer frequent fixed route service, along with coverage service.
- Consider Mobility Zones – designated areas with demand response service available to help provide first-last mile solutions for system users.
- Use a phased implementation plan to fund fixed route transit system growth and sustainability – to achieve full mobility for all travelers, the region must invest in transit at a significantly higher rate than it currently does and must work to identify a dedicated local funding source that does not completely rely on federal, state, and local funding.

➤ **Alternative Analysis Study:**

- The Northwest Arkansas region should create and adopt an integrated land use and transportation plan that is based on promotion of mixed-use development patterns.
- Communities in Northwest Arkansas can become “transit ready” ahead of a system being built.
- Keep the development focused in the corridor.
- Look for ways to add energy and developer interest in the communities and downtowns.
- When feasible, in addition to the commuter rail Locally Preferred Alternative (LPA) along the A&M railroad, begin a phased development of high-quality Bus Rapid Transit (BRT) along Hwy. 71B.

13. Promote the use of public transit as an alternative to the automobile.

- Support a regional public relations campaign to educate the public.
- Support a study to identify potential transit markets with Northwest Arkansas businesses and municipalities.

14. Encourage Transit Oriented Design practices.

- Coordinate regional land use and transportation systems to serve existing and future transit markets.
- Use Complete Street principles to create a connected sidewalk, bicycle, and roadway system.
- Encourage land use policies that promote the use of other-than-auto modes of transportation.

15. Cities, counties, ARDOT, MoDOT and the Federal government are encouraged to install signs naming waterways at road crossings and trail crossings.

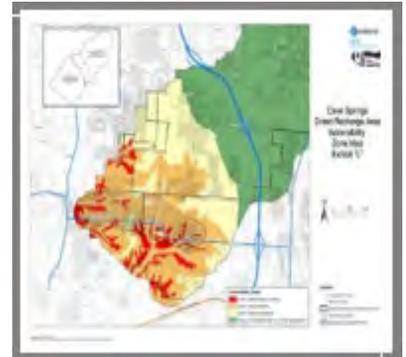
16. Continue a regional commitment to bicycle and pedestrian facilities.

- Apply program and policy recommendations as outlined in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan.
- Support extended development of the Razorback Regional Greenway to the north and south.
- Seek out and use alternative funding for construction and maintenance of existing and new trail facilities.

RELATED PLANS AND STUDIES

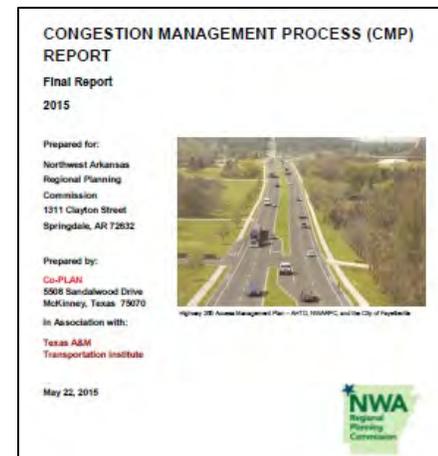
- **Cave Spring Area Karst Resource Conservation Study (Fall 2014-Spring 2016)**

The Cave Springs Area Karst Resource Conservation Study (Karst Study) includes specific objectives such as analyzing existing water quality and species population data, working with the scientific community to determine appropriate actions necessary to ensure adequate protection of local karst recharge zones and also working with local, county and State officials and other stakeholders to determine the best conservation actions and mechanisms for the karst area. More information can be found at: <https://www.nwarpc.org/datacatalog/cave-springs-area-karst-resource-conservation-study/>.



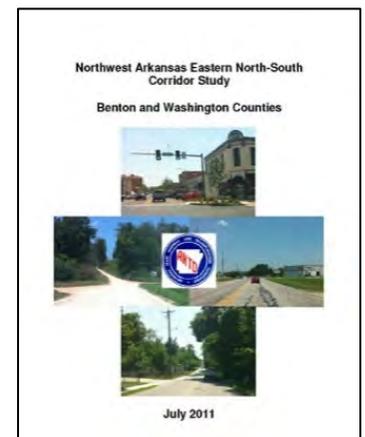
- **Congestion Management Process Report (May 2014-May 2015)**

The Congestion Management Process (CMP) objectives are to develop procedures for evaluating the relative congestion of facilities, develop procedures to determine if congestion mitigation strategies should be implemented for a particular facility, and develop a procedure or procedures for evaluating the effectiveness of congestion mitigation strategies implemented. More information can be found at: <https://www.nwarpc.org/datacatalog/congestion-management-process-cmp-final-report/>. The NWARPC approved the first phase of the CMP on May 27, 2015. A second phase is set to get underway in spring 2021.



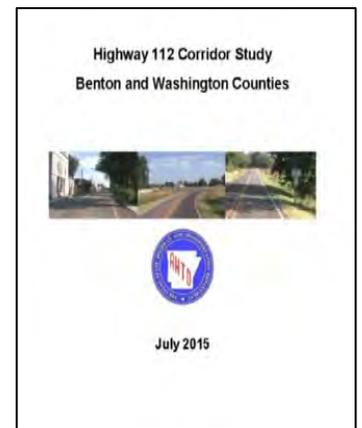
- **Eastern North/South Corridor Study (July 2011)**

At the request of the NWARPC, the Arkansas State Highway Commission passed Minute Order 2009-093, which authorized AHTD to conduct a study of an eastern North-South corridor from Hwy. 16 in Fayetteville to Hwy. 62 in Rogers with considerations of possible connections and alternatives. The purpose of the study was to determine the need for improvements to the eastern North-South corridor with a possible extension to Bentonville. The Study includes a traffic analysis, safety analysis, pavement analysis, and environmental considerations, as well as a discussion of alternatives to existing Hwy. 265 and possible extensions. More information can be found at: <https://www.nwarpc.org/datacatalog/northwest-arkansas-eastern-ns-corridor-study/>.



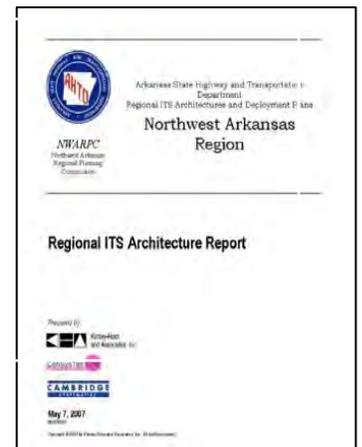
- **AR Hwy. 112 Corridor Study (June 2015)**

At the request of the NWARPC, the Arkansas State Highway Commission passed Minute Order 2012-027, which authorized a study of Hwy. 112, from Fayetteville to Bentonville, a total length of approximately 20 miles. The purpose of the study was to determine the feasibility of improvements to Hwy. 112 to address capacity and safety needs. The Study includes a traffic analysis, safety analysis and an analysis of alternatives. Additionally, the Study points out environmental concerns, such as the Cave Springs Recharge Area, and recommends implementing access management strategies in order to preserve corridor capacity and protect transportation investments. The Study can be found at <https://www.nwarpc.org/datacatalog/highway-112-corridor-study/>.



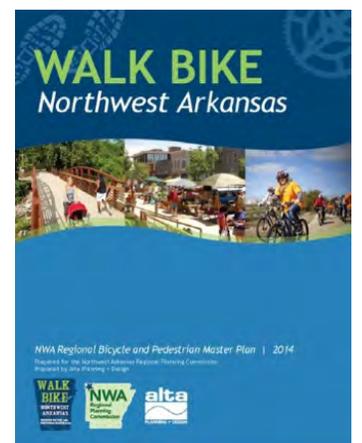
- **NWA Regional ITS Architecture and Deployment Plan (Spring 2007)**

Intelligent transportation system (ITS) is the application of electronic technologies and communications to increase the safety and efficiency of the transportation system. The development of the NWA ITS provides a framework for implementing ITS projects, encouraging inter-operability and resource sharing among agencies, identification of applicable standards to apply to projects, and allowing for cohesive long-range planning among regional stakeholders. A list of recommended ITS projects was developed through input from stakeholders, and grouped into timeframes for deployment based on priority, dependence on other projects, technology, and feasibility. As part of the ITS maintenance, and the MTP update, the ITS Architecture and Deployment Plan has recently been updated. More information can be found at <https://www.nwarpc.org/datacatalog/northwest-arkansas-regional-its-architecture-and-deployment-plan/>.



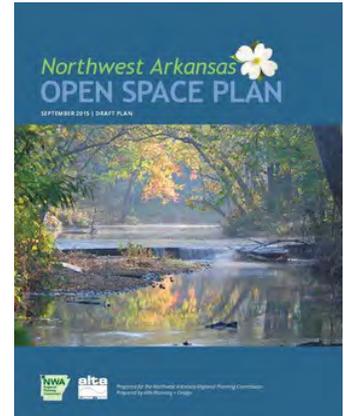
- **NWA Regional Bicycle and Pedestrian Regional Master Plan (2014-2015)**

A major Plan goal was for each city with a population of over 1,000 to have a unique individual Master Trail Plan and for the area to work towards linking all these communities through a regional trail system. Individual city plans were adopted by fall 2015 for 25 cities. Extensive public input was sought for the Regional Master Plan, as well as the individual plans. The Plan was adopted by the RPC/Policy Committee on December 1, 2015. The Plan was utilized as the cornerstone of the bicycle and pedestrian component of the MTP. More information can be found at <http://www.nwabikepedplan.com/>.



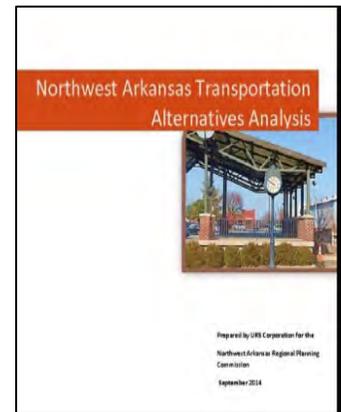
- **NWA Open Space Plan (Fall 2014-Winter 2015)**

The purpose of this Plan was to develop a coordinated, voluntary program to protect and promote the region’s most valued natural landscapes and open spaces. The goal is to preserve these assets, thereby maintaining a high quality of life as the region continues to grow and prosper. The Plan was utilized as the basis of the environmental component of the MTP. More information can be found at: <http://www.nwaopenspace.com/>.



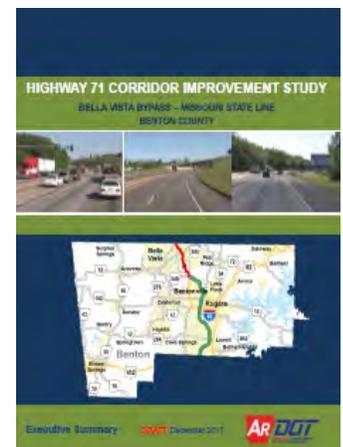
- **NWA Transportation Alternatives Analysis Study (2014)**

The Study approach followed the planning guidelines of the FTA, especially those that apply to New Starts and Major Capital Investment funding. The purpose of the project was to carry out a transportation alternatives analysis concentrating on three major alternatives: Light Rail (new location on I-49 corridor), Commuter Rail (on A&M Railroad Corridor), and Bus Rapid Transit (on Hwy. 71B). In September 2014 the RPC/Policy Committee accepted the Alternatives Analysis Study with the understanding that none of the alternatives considered are financially feasible at this time based on low ridership forecasts, high capital costs, and did not meet the FTA threshold to receive Federal funding, and that the A&M Railroad has the most potential for a future fixed guide way commuter rail system. More information can be found at: <https://www.nwarpc.org/datacatalog/northwest-arkansas-alternatives-analysis-final-report/>.



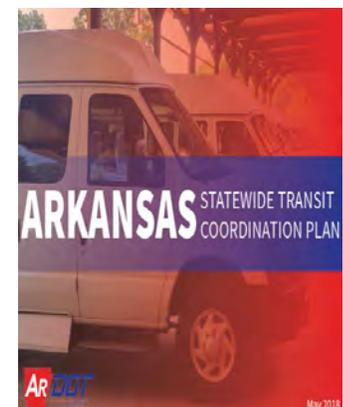
- **Highway 71 Corridor Improvements Study – Bella Vista Bypass to Missouri State Line (2017)**

Because of the congestion due to the rapid growth in the NWA region, local officials requested a study to evaluate the need for intersection improvements along the Highway 71 corridor through Bella Vista to enhance safety and improve traffic flow. As a result, the Arkansas State Highway Commission adopted Minute Order 2014-050, authorizing a study to identify needed improvements to Highway 71 between the I-49 interchange and the Missouri State Line. More information can be found at: https://www.nwarpc.org/wp-content/uploads/2021/01/Hwy-71-Executive-Summary_FINAL_DRAFT-2.pdf.



- **Arkansas Statewide Transit Coordination Plan (2018)**

The Federal transportation legislation under Moving Ahead for Progress in the Twenty-First Century (MAP-21) and the Fixing America’s Surface Transportation Act (FAST Act), requires that projects for certain FTA programs be derived from a locally developed, coordinated public transit-human services transportation plan. ARDOT’s updated plan is intended to satisfy the federal requirements of Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities Program. These requirements are aimed at improving transit services for persons with disabilities, older adults and individuals with low incomes and ensuring that communities are coordinating transit resources provided through multiple federal programs.

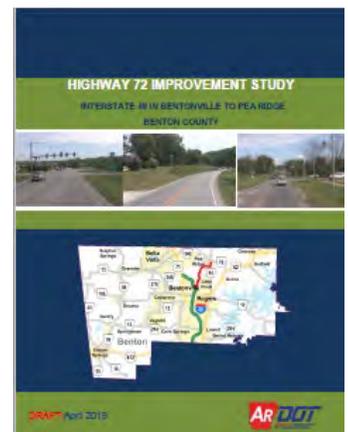


The overall objective of the Arkansas Statewide Transit Coordination Plan is to determine where there are gaps in public transit and human services transportation service in Arkansas and develop coordination strategies and identify projects to address identified gaps. For additional information on this plan go to the [ARDOT's publications page](#).

- **Highway 72 Improvement Study – I-49 in Bentonville to Pea Ridge (2019)**

At the request of local officials, the Arkansas State Highway Commission adopted Minute Order 2016-008, authorizing a study of needed improvement to Highway between I-49 in Bentonville and Pea Ridge.

Highway 72 is an east-west minor arterial that connects Bentonville and Pea Ridge in NWA, a distance of approximately 7.6 miles. As part of the Arkansas Primary Highway Network (APHN), Highway 72 serves as the primary route for commuters between the two cities, and travel delay induced by rapid growth in the area has raised concerns. For more information go to: <https://www.nwarpc.org/wp-content/uploads/2021/01/Hwy-72-Improvement-Study-I-49-to-Pea-Ridge-Commission-1.pdf>.



- **Highway 62 and Highway 102 Study – Highway 102B to Highway 94 (2019)**

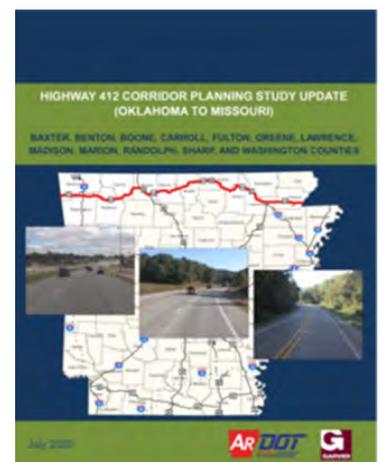
ARDOT, in cooperation with FHWA, conducted a study to assess safety and congestion along Highway 62 and 102 in Centerton, Bentonville, and Rogers between Highway 102B and Highway 94. The study focused on several intersections along the study alignment, while also considering improving reliability, balancing access and mobility, and improving safety. The study considered anticipated land use changes in the study area as well as all modes of transportation while developing improvement alternatives. More information can be found at: https://www.nwarpc.org/wp-content/uploads/2021/01/Hwy-62-Hwy-102-Fact-Sheet_Final.pdf.



- **Highway 412 Corridor Planning Study Update (Oklahoma to Missouri) (2020)**

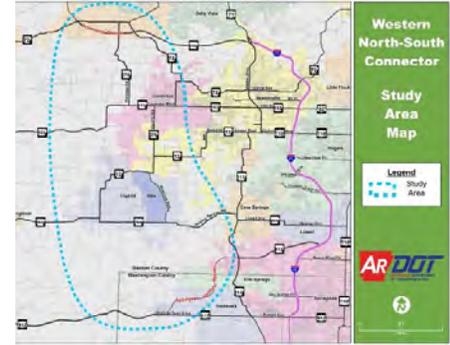
Highway 412 is the only continuous principal arterial parallel to, and north of, I-20 in Arkansas. As a Congressionally-designated High Priority Corridor and an element of the National Highway System, Highway 412 is part of a strategic network of highways that support the Nation’s economy, defense, and mobility.

In February 2017, Governor Asa Hutchinson signed House Concurrent Resolution 1007, encouraging the expansion of the Highway 412 corridor to improve accessibility and create economic prosperity in northern Arkansas. In October 2017, the Arkansas State Highway Commission adopted Minute Order 2017-101 authorizing a study to update and expand the *US 412 Corridor Planning Study* from the Oklahoma State line to the Missouri State Line. <https://www.nwarpc.org/wp-content/uploads/2021/01/Hwy-412-Executive-Summary-2020-4.pdf>.



- **Western North-South Connector Study**

As authorized by Minute Order 2019-011, the purpose of this study is to determine the need for and feasibility of a new highway connection from Highway 612 (Highway 412 Northern Bypass) to Highway 549 (future I-49, formerly known as the Bella Vista Bypass) west of I-49 in NWA. An evaluation of existing and future traffic operations, historical crashes, infrastructure conditions, and other considerations will lay the foundation for the development of solutions that are in line with the goals of this study and the overarching goals established in the Arkansas Long Range Intermodal Transportation Plan (LRITP) and the Arkansas State Freight Plan (SFP).





CHAPTER 2. VISION, GOALS AND MTP FRAMEWORK

2045 MTP VISION

In order to create a framework for the 2045 Metropolitan Transportation Plan (MTP), a vision statement was drafted by the Vision/Goals Committee and presented to the TAC, RPC/Policy Committee and the public. As is evident in the following vision statement, this region understands the rapid growth rate of the area and the need for a multimodal (alternative, innovative, resilient, sustainable) transportation system.

The Northwest Arkansas region will develop and maintain a safe, reliable, and efficient transportation system for the movement of people and goods throughout the area. The system will include a safe, secure, well-integrated and connected roadway, transit, freight, pedestrian and bicycle network. The system will enhance and sustain a high level of economic vitality, community livability and quality of life by providing movement of goods, choice, mobility, convenience and energy efficiency.

GOALS, OBJECTIVES AND MTP FRAMEWORK

In order to create a plan to complement the aforementioned vision, five goals and supporting objectives were adopted. The Goals and Objectives were derived from the extensive public input gathered throughout MTP development, and approved by the TAC and RPC/Policy Committee. The MTP Goals and Objectives create the groundwork for future policies to ensure that Northwest Arkansas is able to meet the demands of the transportation system in the most economical manner. Additionally, they challenge the region to think beyond strictly transportation and begin to make the connection between transportation and the broader society.

2045 MTP FRAMEWORK

To guide decision-making and comply with the Federal transportation legislation, MAP-21/FAST Act, the 2045 MTP Framework was developed around national goals, ARDOT and MoDOT goals, and MTP goals. The table below illustrates how Federal and State DOT transportation goals align with MTP 2045 goals. The 2045 MTP Framework also establishes potential MTP System Performance Measures tied to each of the national, State and MTP goals with the opportunity to track progress towards these goals.

2045 Metropolitan Transportation Plan - Framework - National, State, and Region						
National Goal Area	National Goals	ARDOT Goals	MoDOT Goals	NWARPC 2045 MTP Goals		2045 MTP System Performance Measures
Infrastructure Condition - State of Good Repair	To maintain the highway infrastructure asset system in a state of good repair	Invest in the existing highway and bridges to maintain and preserve the existing system.	Take care of the transportation system and services we enjoy today	Preserve and Maintain Infrastructure	Maintain the existing and planned transportation system through ongoing maintenance, rehabilitation, reconstruction, and/or preservation.	Percentage of interstate pavements in good condition Percentage of interstate pavements in poor condition Percentage of non-interstate NHS pavements in good condition Percentage of non-interstate NHS pavements in poor condition Percent of NHS bridges by deck area classified as Good condition Percent of NHS bridges by deck area classified as Poor condition Pavement Condition on NHS Transit (PTASP) mean distance between major mechanical failure Transit (TAM) Plan transit bus/fleet age/condition
Safety and Security	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads	Improve statewide safety for all modes and all users and reduce system vulnerability and improve system resiliency to maintain essential travel during extreme events.	Keep all travelers safe, no matter the mode of transportation	Improve Safety	Increase transportation safety for all modes of travel	Number of fatalities Fatality rate per 100 million VMT Number of serious injuries Serious injury rate per 100 million VMT Number of non-motorized fatalities and serious injuries Transit (PTASP) Number of fatalities and injuries and rate per revenue miles traveled
Congestion Reduction and System Reliability	To achieve a significant reduction in congestion on the National Highway System. To improve the efficiency of the surface transportation system	Invest in the multimodal transportation system to improve mobility, connectivity, accessibility, and reliability for people and goods.	Improve reliability and reduce congestion on Missouri's transportation system	Reduce Congestion Improve Reliability	Maximize the capacity and reliability of existing facilities on regionally significant routes and minimize the need for new roadways.	Interstate Travel Time Reliability Measure: Percent of Reliable Person-Miles Traveled on the Interstate Non-Interstate Travel Time Reliability Measure: Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS Freight Reliability Measure: Truck Travel Time Reliability Index
Freight Movement and Economic Vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development	Improve intermodal transportation system connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness. Partner with Metropolitan Planning Organizations, Planning and Development Districts, local governments, and other responsible modal agencies to improve intermodal transportation system safety, accessibility, and connectivity.	Invest in projects that spur economic growth and create jobs	Improve Regional Mobility	Increase transportation mobility and accessibility for both persons and freight, thus promoting economic vitality in the region.	Miles of Complete Streets Miles of roadways with Access Management % population served by trails within 1/4 mile % population served by public transit within 1/4 mile Unlinked Trips per revenue mile (Transit, NTD) Unlinked Trips per Revenue hour (Transit, NTD)
Environmental Sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment	Enhance the performance of the transportation system while avoiding, minimizing, and/or mitigating impacts to natural and cultural resources.	Give Missourians better transportation choices	Protect the Environment	To enhance the performance of the transportation system while protecting and enhancing the natural environment.	Number of Jurisdictions with drainage criteria manuals Number of jurisdictions with Karst BMP's Cave Springs Recharge Area

GOAL I.

NATIONAL GOAL AREA	NATIONAL GOAL	ARDOT GOAL	MODOT GOAL
Safety and Security	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.	Improve statewide safety funding projects reducing fatal and serious injury crashes, reducing vulnerability (in magnitude of impact on the system due to events such as major traffic incidents, flooding, lane closures, bridge failures, and seismic activity), and improving resiliency of the system (the ability of the system to recover from these events).	Keep all travelers safe, no matter the mode of transportation.

MTP GOAL I: Increase transportation safety for all modes of travel by providing safe and secure travel for all modes of transportation, including walking, bicycling, transit and vehicular.

OBJECTIVES

1. Encourage improved traffic operations, access management and other strategies and measures to reduce the number and rate of crashes and improve system reliability.
2. Encourage the use of intelligent transportation systems (ITS) that improve the emergency response to incidents and clearing of incidents to improve safety and system reliability.
3. Implement strategies that help reduce fatality and serious injury crash rates for all modes.
4. Promote and improve safety for pedestrians, bicyclists, and other non-motorized travelers through adherence to the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan.
5. Encourage transit agencies to implement safety performance targets and measures and safety management Systems.

GOAL I: ACTUAL AND POTENTIAL 2045 MTP SYSTEM PERFORMANCE MEASURES

Number of fatalities	Rate of fatalities per 100M VMT	Number of serious injuries	Number of serious injuries per 100M VMT	Number of non-motorized fatalities and serious injuries

GOAL II.

NATIONAL GOAL AREA	NATIONAL GOALS	ARDOT GOALS	MODOT GOALS
Infrastructure Condition – State of Good Repair	To maintain the highway infrastructure asset system in a state of good repair.	Invest in the existing highway and bridges to maintain and preserve the existing system.	Take care of the transportation system and service enjoyed today.
MTP GOAL II: Maintain the existing and planned transportation system through ongoing maintenance, rehabilitation, reconstruction, and/or preservation by identifying and protecting corridors needed for future highway, transit, freight, or other transportation system requirements.			
OBJECTIVES			
1. Support the adoption of local right-of-way plans, policies and ordinances as needed to identify, acquire and protect the right-of-way within corridors as development continues.			
2. When feasible, identify future corridors for advance right-of-way acquisition for highways, local roads, transit, bicycle and pedestrian use.			
3. Promote shared right-of-way/easements for multiple purposes and utilities.			
4. Maintain and preserve existing highway, transit and other facilities in good condition. Employ system performance measures, such as Pavement Management Systems (overlay programs), Pavement Performance Index to gauge the transportation system’s optimum use and efficiency, bridge repair based on ratings, and Maintenance Principles for age of transit fleets.			
5. Encourage transit agencies to implement performance targets and measures as recommended in Transit Asset Management Plans.			
GOAL II: ACTUAL AND POTENTIAL 2045 MTP SYSTEM PERFORMANCE MEASURES			
Bridge Condition on NHS	Pavement Condition on NHS	Transit Asset Management Plan (TAM Plan)	

GOAL III.

NATIONAL GOAL AREA	NATIONAL GOALS	ARDOT GOALS	MODOT GOALS
Congestion Reduction and System Reliability	To achieve a significant reduction in congestion on the National Highway System. To improve the efficiency of the surface transportation system.	Invest in the multimodal transportation system to improve mobility, connectivity, accessibility, and reliability for people and goods.	Improve reliability and reduce congestion on Missouri’s transportation system.
MTP GOAL III: Maximize the capacity and reliability of existing road and transit facilities on regionally significant routes and minimize the need for new roadways.			
OBJECTIVE – Address congestion and system reliability and maximizing efficiency and effectiveness through Management and Operations.			
<ol style="list-style-type: none"> 1. Align the Northwest Arkansas Congestion Management Process (CMP) closely with the MTP and use the CMP performance measures in project prioritization and funding that will maximize capacity and system reliability. 2. Manage access to and from adjacent property in key corridors, thus improving vehicular and pedestrian safety and reliability. 3. Safeguard transportation investments by promoting access management policies. 4. Encourage use of management and operations such as ridesharing, transit service, and coordinated traffic signals and traffic operations. 			
OBJECTIVE – Endeavor to reduce congestion by supporting alternative transportation modes.			
<ol style="list-style-type: none"> 1. Provide adequate and steady funding to operate existing public transit systems and implement recommendations of Connect NWA Transit Development Plan. 2. Provide improved pedestrian connectivity by providing sidewalks and/or trails to good, services, jobs, schools, and recreation activities and providing safe crossings of roadways. 3. Continue development of the regional trail system for bicycles and pedestrians that provides a safe route of travel between home, work and services as an alternative means of transportation through use of the principals included in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan. 4. Encourage and support bus rapid transit and commuter rail transportation alternatives with the understanding that financial feasibility will depend on population density, ridership, capital costs, and potential federal, state and local funding. 			
OBJECTIVE – Encourage land development patterns that promote transportation efficiency.			
<ol style="list-style-type: none"> 1. Support in-fill development and the concentration of new commercial and office space activity that enhance the utilization of alternative forms of transportation. 2. Identify transit corridors that allow higher density mixed-use areas to be served by public transit. 3. Encourage major facilities to locate along planned public transit lines and implement “transit friendly” strategies. 4. Encourage transit stops/stations within convenient walking distance of major concentrations of employment. 			
GOAL III. ACTUAL AND POTENTIAL 2045 MTP SYSTEM PERFORMANCE MEASURES			
Volume Delay per Mile on CMP	Congestion Index on CMP	Travel Time on CMP	

GOAL IV.

NATIONAL GOAL AREA	NATIONAL GOAL	ARDOT GOAL	MODOT GOAL
<p>Freight Movement and Economic Vitality</p>	<p>To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.</p>	<p>Multimodal Transportation System – Partner with responsible modal agencies, local jurisdictions, and planning organizations working to improve safety, accessibility, and connectivity for the movement of people and goods. Economic Competitiveness – Improve intermodal transportation system connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness.</p>	<p>Invest in projects that spur economic growth and create jobs.</p>
<p>MTP GOAL IV: Increase transportation mobility and accessibility for both persons and freight, thus promoting economic vitality in the region.</p>			
<p>OBJECTIVE – Support an integrated system with efficient connections between transportation modes.</p>			
<p>1. Minimize travel time and increase reliability.</p>			
<p>2. Increase accessibility to employment centers.</p>			
<p>3. Increase accessibility to other major commercial, industrial, educational, medical, and recreation centers.</p>			
<p>4. Provide for access to developing areas in the region.</p>			
<p>5. Encourage transit supportive infrastructure to be implemented at the time of new construction or improvements.</p>			
<p>OBJECTIVE – Enhance commerce with intercity transportation within the region and beyond.</p>			
<p>1. Promote improvements that facilitate the efficient movement of freight and enhance regional and global competitiveness.</p>			
<p>2. Encourage cooperative planning with other transportation agencies to insure regional goals.</p>			
<p>3. Promote reliable travel time to aid in just-in-time manufacturing process and supply chain.</p>			
<p>4. Begin a regional discussion on connecting NWA with a high speed rail system to a broader region.</p>			
<p>GOAL IV. ACTUAL AND POTENTIAL 2045 MTP SYSTEM PERFORMANCE MEASURES</p>			

Miles of Complete Streets	Miles of roadways with Access Management	Number of Catalyst Projects	Miles of Improved Arterial Network	Percent population served by transit within ¼ mile	Unlinked Trips per Passenger Mile (NTD)	Unlinked Trips per Passenger Hour (NTD)
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GOAL V.

NATIONAL GOAL AREA	NATIONAL GOAL	ARDOT GOAL	MODOT GOAL
Environmental Sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment.	Enhance the performance of the transportation system while avoiding, minimizing and/or mitigating impacts to natural and cultural resources.	Give Missourians better transportation choices.

MTP GOAL V: Provide a transportation system that protects and enhances the environment, promotes energy conservation and improves the quality of life.

OBJECTIVE – Support the regional implementation of recommendations covered in the Cave Springs Karst Area Resource Conservation Study and the Northwest Arkansas Open Space Plan.

1. Encourage and assist local jurisdictions in adoption of drainage ordinances.
2. Encourage implementation of Best Management Practices in the Karst geology recharge area.
3. Promote conservation of various types of open space through use of strategies contained in the Open Space Plan.

OBJECTIVE – Identify and encourage the use of developing technologies and sources of energy that assist in protecting the natural environment.

1. Minimize energy consumption on a system-wide basis by reducing congestion and improving reliability.
2. Minimize air, water, noise and visual pollution.
3. Minimize disturbances of the region’s natural aesthetics and wildlife habitat.
4. Provide for needed highway and transit system enhancements. Encourage transit agencies to plan and efficiently implement the timely transition of their fleet to electric vehicles.

GOAL V. ACTUAL AND POTENTIAL 2045 MTP SYSTEM PERFORMANCE MEASURES

Number of jurisdictions with drainage criteria manuals

Number of jurisdictions with Karst BMPs in the Cave Springs Recharge Area



CHAPTER 3. POPULATION, HOUSING AND LAND USE

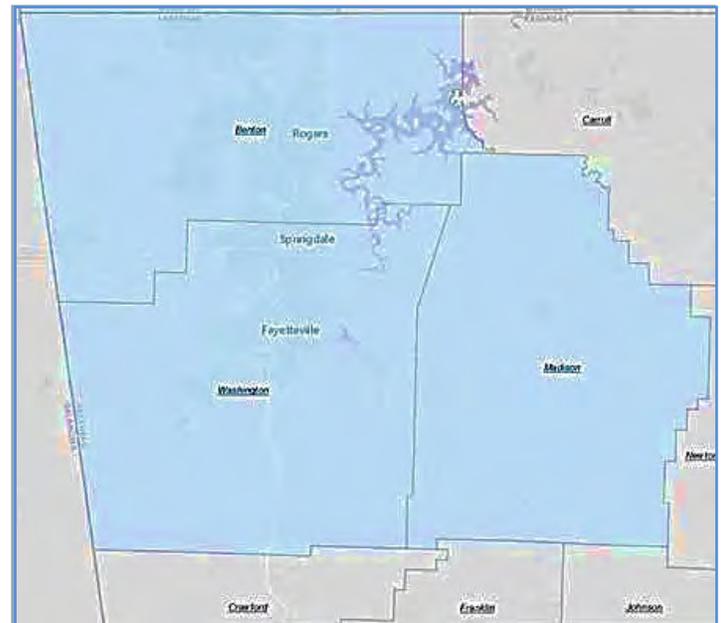
OVERVIEW OF EXISTING SOCIO-ECONOMIC CONDITIONS

The NWARPC is the federally designated Metropolitan Planning Organization (MPO) for Benton and Washington Counties, Arkansas and a portion of McDonald County, Missouri.

The Urbanized Area for this region, as identified by the U.S. Census Bureau includes Benton and Washington Counties and a portion of McDonald County.

The U.S. Census Bureau designated Fayetteville-Springdale-Rogers Metropolitan Statistical Area (MSA) includes Benton County, Washington County and Madison County, Arkansas (three-county area).

For the purpose of this chapter, “Northwest Arkansas” will refer to the two-county area of Benton and Washington Counties in Arkansas, and, when specified, will include the portion of McDonald County, Missouri.



Fayetteville- Springdale-Rogers, AR -MSA Area

Geographic Profile

The Fayetteville-Springdale-Rogers Metropolitan Statistical Area currently encompasses three counties including Benton, Madison, and Washington Counties in Arkansas. The Northwest Arkansas Transportation Study Area (NARTS) consists of Benton and Washington County and a small portion of McDonald County in Missouri.

Benton County

- Covers 880 square miles.
- Has 846 square miles of land.
- Has 43 square miles of water.
- 153,406 in Census 2000 population.
- 221,339 in Census 2010 population.
- This represents a 43.3 percent increase and an annual growth rate of 3.73 percent.
- On average there were 6,793 people per year moving to Benton County since Census day, April 1, 2000.
- There are nineteen incorporated cities in Benton County.
- All or part of nine Benton County cities fell within the Census defined Urbanized Area in Census 2010, including the cities of Bella Vista, Bethel Heights (incorporated into Springdale, 2020), Bentonville, Cave Springs, Centerton, Little Flock, Lowell, Pea Ridge, and Rogers.
- Siloam Springs meets the Census definition of an Urban Cluster.
- Most of the population of Benton County is located along the I-49 corridor.
- The 2018 American Community Survey 5-year estimates the total population to be at 258,980.

Washington County

- Covers 956 square miles.
- Has 950 square miles of land.
- Has 6 square miles of water.
- 153,406 in Census 2000 population.
- 203,065 in Census 2010 population.
- This represents a 28.8 percent increase and an annual growth rate of 2.56 percent.
- On average there were 4,535 people per year moving to Washington County since Census day, April 1, 2000.
- There are thirteen incorporated cities Washington County.
- Nine of these cities fall within the urbanized area criteria. These cities include Elkins, Elm Springs, Farmington, Fayetteville, Greenland, Johnson, Springdale, Prairie Grove, and Tontitown.
- The majority of residents live near the I-49 corridor.
- The 2018 American Community Survey 5-year estimates the total population to be at 228,529.

Portion of McDonald County

The Metropolitan Planning Area (MPA) in McDonald County, Missouri is approximately 30.7 square miles. This portion of the county is mainly traversed by US Highway 71 and is largely rural in nature.

- The portion of the MPA in McDonald County, Missouri had approximately 2,089 population and approximately 751 housing units (2010 Census).
- Has approximately 751 housing units recorded during the 2010 Census.
- The Elk River is formed at Pineville, Missouri by the confluence of Big Sugar Creek and Little Sugar Creek.
- Pineville (the county seat for McDonald County), has a total area of 3.11 square miles. It had a recorded population of 791 and 287 households by the 2010 Census Bureau. The 2018 American Community Survey 5-year estimates the total population of Pineville City to be 811.
- Jane is a small community of 301 people in 2010 and is situated on Route 90 at the intersection with US Highway 71. The 2018 American Community Survey 5-year estimates the total population to be 445.

Households and Families

In 2015-2019, there were 190,853 households in Fayetteville-Springdale-Rogers, AR Metro Area. The average household size was 2.64 people.

Married-couple households made up 53.2 percent of the households in Fayetteville-Springdale-Rogers, AR Metro Area while cohabiting couple households made up 6.2 percent of households. Female householder families with no spouse or partner present and own children under 18 years were 4.7 percent of all households, while 1.6 percent of households were male householder families with no spouse or partner present and own children under 18 years. Of people living alone, 11.5 percent were male householders, and 13.1 percent were female householders, for a total of 24.6 percent of all households.

In Fayetteville-Springdale-Rogers, AR Metro Area, 35.5 percent of all households have one or more people under the age of 18; 23.4 percent of all households have one or more people 65 years and over.

Population Growth

In 2010, according to the U.S. Census Bureau, the two-county (Benton and Washington) population was 424,404. The Northwest Arkansas regional population has grown annually at a 3.15 percent rate from Census 2000 to 2010. This represents, on average, an annual population increase of about 11,328 in Northwest Arkansas. By July 2019, the American Community Survey (ACS) one-year population estimate of the two counties was 518,328 (279,141 for Benton County and 239,187 for Washington County). Between the July 2015 ACS and 2019 ACS period of four years, there was an increase of 55,215 people in the two counties.

Population by Age

In 2015-2019, Fayetteville-Springdale-Rogers, AR Metro Area had a total population of 514,259 – 258,310 (50.2 percent) females and 255,949 (49.8 percent) males. The median age was 34.0 years. An estimated 25.5 percent of the population was under 18 years, 39.5 percent was 18 to 44 years, 22.4 percent was 45 to 64 years, and 12.6 percent was 65 years and older. Figure 3.1 illustrates the population by age group as a percentage of the total population in the MSA.

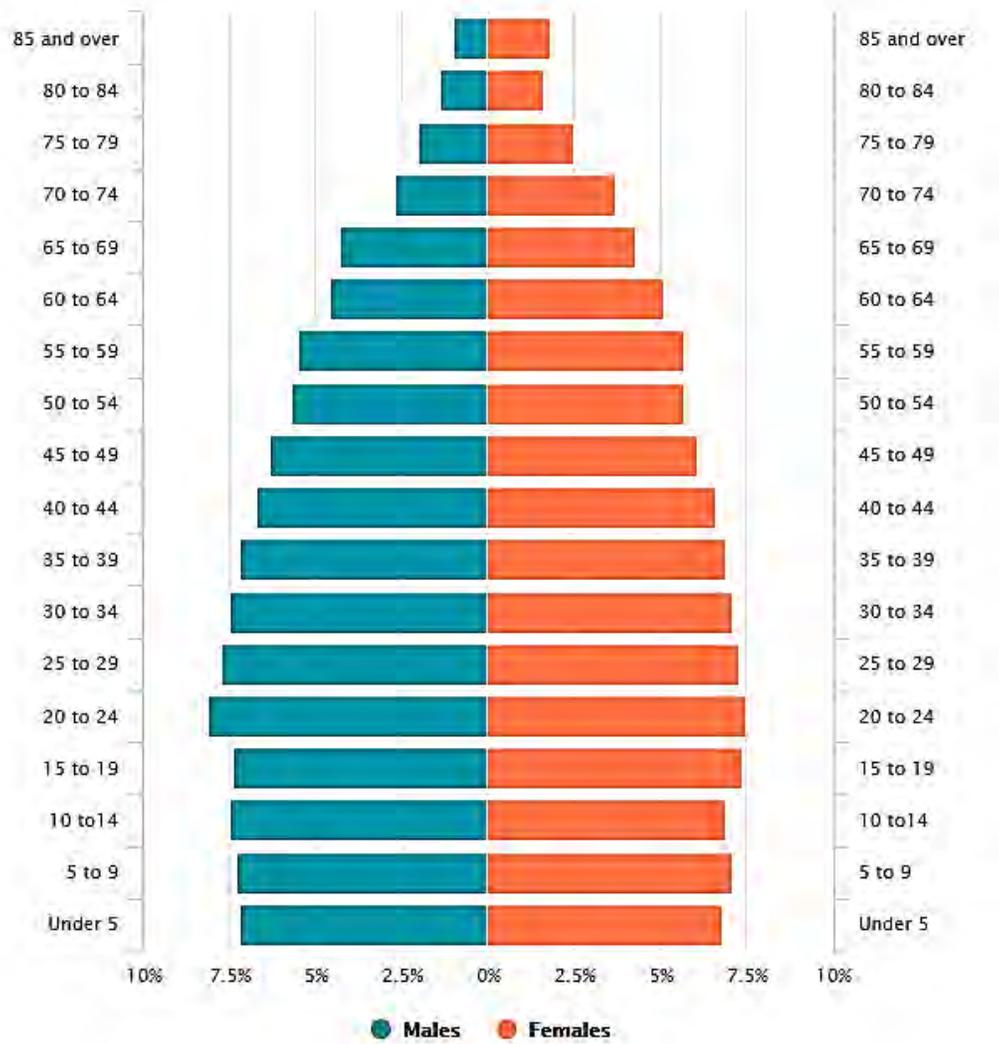
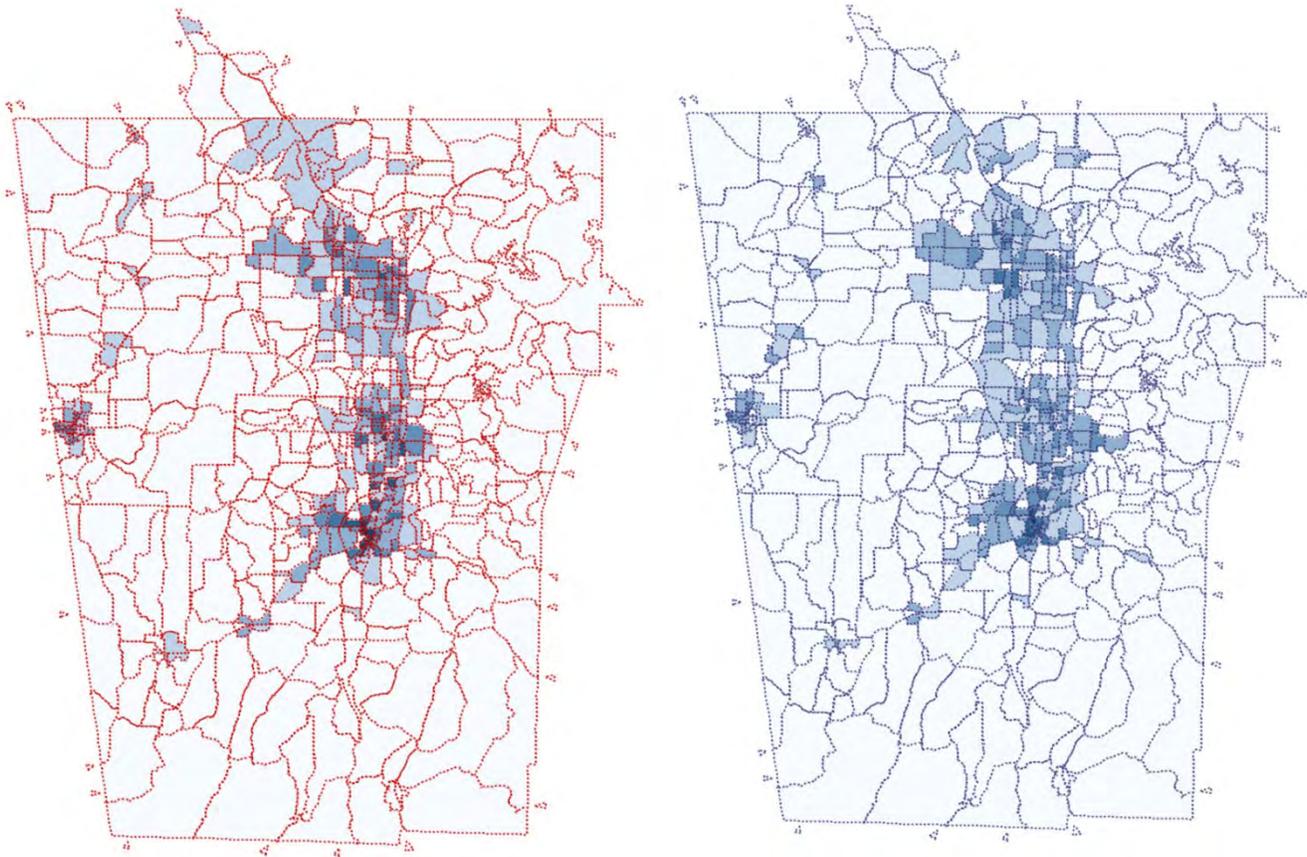


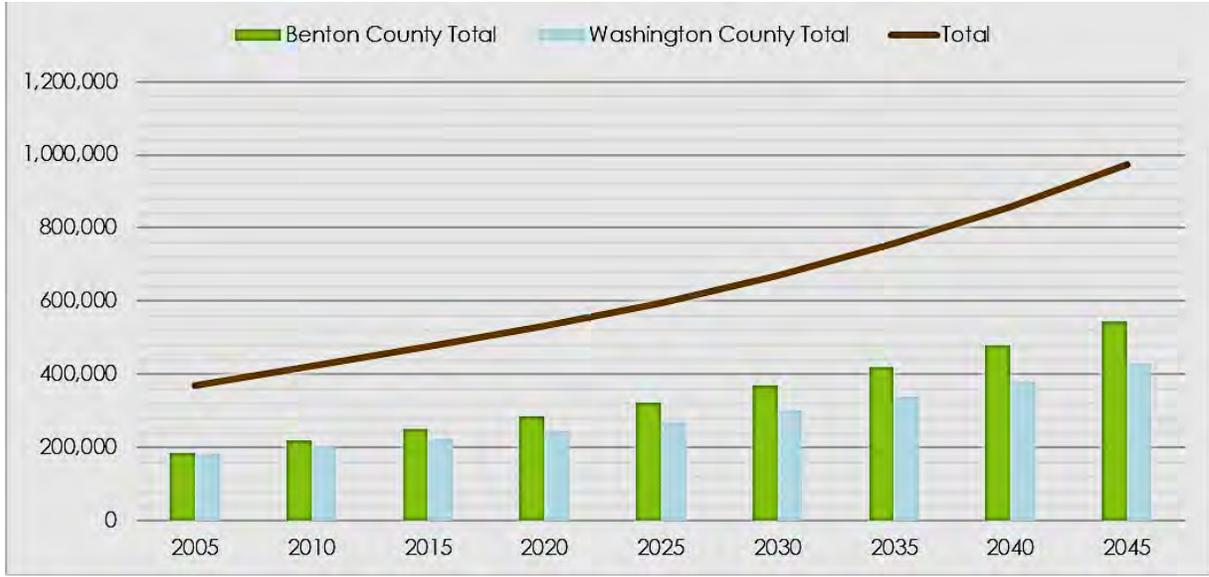
Figure 3.1 - Population by Age in the Fayetteville, Springdale, Rogers, AR MSA

Population Projections

In summer of 2019, the Arkansas Economic Development Institute (AEDI) developed detailed demographic population projections for Benton and Washington Counties by using an age, gender, births, deaths and migration cohort methodology. The population projection graphics illustrated here used the 2019 AEDI projections for the two counties in Northwest Arkansas. Based on this methodology, AEDI projected that by 2045 the population of Benton and Washington Counties will reach 974,275 people (with 545,893 people in Benton County and 428,382 people in Washington County). See Table 3.1.



Map 3.1 - Population Density by Traffic Analysis Zones in 2018 (left) and projected to 2045 (right)



Geography	Population
2 Counties Total	974,275
Benton	545,893
Washington	428,382

Figure 3.2 - Population Projections – Source Arkansas Economic Development Institute 2019

City Population Projections

The estimated and projected populations for 2045 is shown in Table 3.1 for all the cities and incorporated Benton and Washington Counties area. These projections were based on the allocation of households to the traffic analysis zones in each city as part of the NWA Travel Demand Model. The total projected population of all incorporated and unincorporated areas are tied back to the projected population totals for each county. In both counties, many jurisdictions had an overall percent growth over 100 percent between 2020 NWARPC population estimates and NWARPC projected 2045 population. Numerous small cities have projected percent population increases of over 150 percent (Tontitown, Highfill, Greenland or Elm Springs). All cities are projected to have higher than 1 percent annual average growth rates, with the smaller communities of Tontitown, Highfill and Cave Springs growth rates higher than 5 percent. The highest total population is projected for Springdale at 154,352, an 81 percent increase from 2020 at a 2.4 percent annual average growth rate. Fayetteville will have a projected growth of 69.1 percent to reach 150,977 people by 2045. In Benton County the highest population number is projected in Rogers at 124,307, an increase of 77 percent from 2020. Bentonville is projected to have the highest percent population increase projected to grow by approximately 97.1 percent reaching 113,658 people in 2045. These population projections reflect the dramatic growth that the region has experienced in the past 30 years and are meant to help guide city planning departments and regional planners to assess future infrastructure needs for the region. These projections are also used in forecasting traffic as part of the Northwest Arkansas travel demand model.

The four largest cities in the two-county area are continuing to add population in their jurisdictions, with Fayetteville, Springdale and Rogers continuing to be the most populated cities in the area. Bentonville projected to grow at a faster rate than previous projections estimated as illustrated in the Figure 3.3 below.

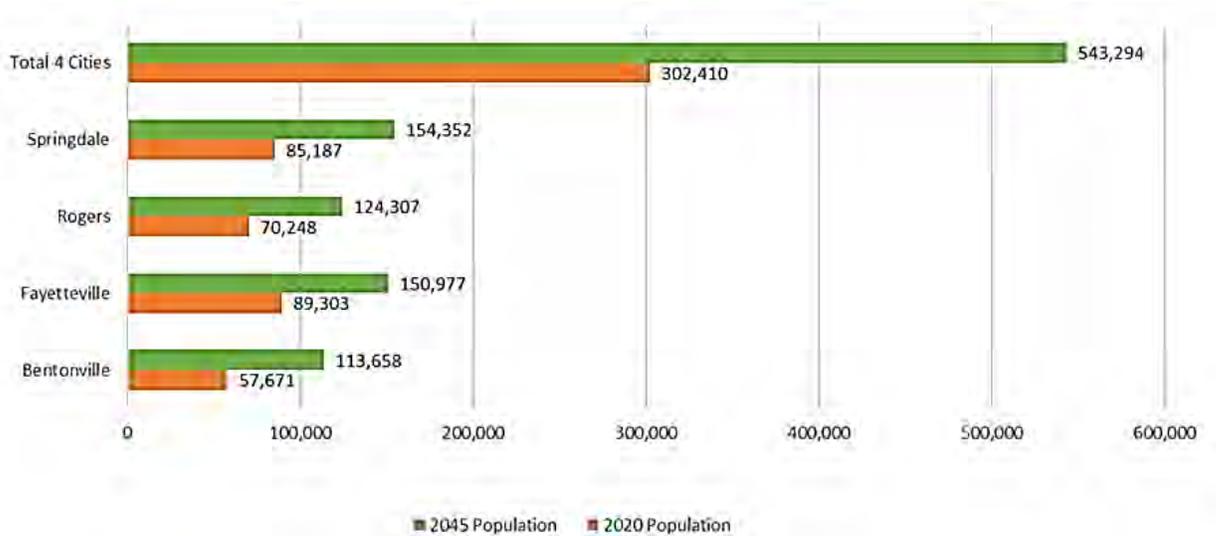


Figure 3.3 - Population Projections for the Four Largest Cities in Northwest Arkansas

City Name	2020 Population Estimate NWARPC	2045 Population Projection NWARPC	2020 to 2045 Difference	Percent Change 2020 to 2045	Annual Average Growth Rate 2020 to 2045
Avoca	520	740	220	42.3%	1.4%
Bella Vista	29,145	48,089	18,944	65.0%	2.0%
Bentonville	57,671	113,658	55,987	97.1%	2.8%
Cave Springs	5,899	14,668	8,769	148.6%	3.7%
Centerton	17,239	38,412	21,173	122.8%	3.3%
Decatur	1,800	2,681	881	48.9%	1.6%
Elkins	3,595	7,431	3,836	106.7%	2.9%
Elm Springs	2,546	6,365	3,819	150.0%	3.7%
Farmington	7,578	15,531	7,953	104.9%	2.9%
Fayetteville	89,303	150,977	61,674	69.1%	2.1%
Garfield	587	790	203	34.5%	1.2%
Gateway	486	987	501	103.2%	2.9%
Gentry	4,093	9,126	5,033	123.0%	3.3%
Goshen	2,074	3,569	1,495	72.1%	2.2%
Gravette	3,564	8,331	4,767	133.8%	3.5%
Greenland	1,416	5,522	4,106	290.1%	5.6%
Highfill	641	3,228	2,587	403.6%	6.7%
Johnson	3,788	6,254	2,466	65.1%	2.0%
Lincoln	2,508	4,007	1,499	59.8%	1.9%
Little Flock	2,809	7,072	4,263	151.7%	3.8%
Lowell	9,828	24,646	14,818	150.8%	3.7%
Pea Ridge	6,392	13,284	6,892	107.8%	3.0%
Prairie Grove	7,062	10,668	3,606	51.1%	1.7%
Rogers	70,248	124,307	54,059	77.0%	2.3%
Siloam Springs	17,347	24,788	7,441	42.9%	1.4%
Springdale*	85,187	154,352	69,165	81.2%	2.4%
Springtown	98	211	113	114.9%	3.1%
Sulphur Springs	531	847	316	59.6%	1.9%
Tontitown	4,644	15,548	10,904	234.8%	5.0%
West Fork	2,695	6,867	4,172	154.8%	3.8%
Winslow	428	565	137	32.1%	1.1%
Total Cities	441,725	823,522	381,797	86.43%	2.52%
Benton County Population	285,496	545,893	260,397	91.2%	2.6%
Washington County Population	245,808	428,382	182,574	74.3%	2.2%
Unincorporated Areas Population 2045 MTP	89,579	150,753	61,174	68.3%	2.1%
Total Two Counties Population	531,304	974,275	442,971	83.4%	2.5%

Table 3.1 - NWARPC Population Projections for the two-county region municipalities

Notes:

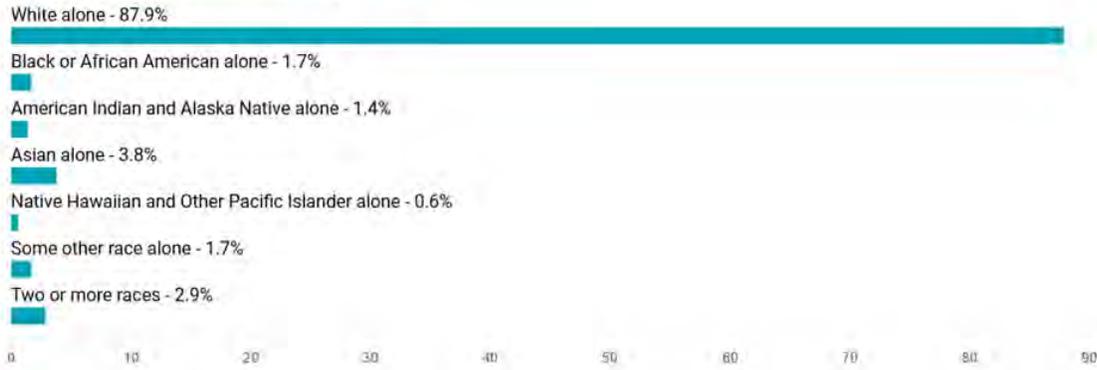
*Springdale includes the population of Bethel Heights in 2045. 2020 Census Population shows Annual Estimates of the Resident Population for Incorporated Places in Arkansas: April 1, 2010 to July 1, 2019. Forecasted population to 2020 is using city AAGR between 2010 to 2019.

2045 MTP Projection Population Source: State Cohort Component Model, Arkansas Economic Development Institute (AEDI), 2019.

Demographic Estimates - Race

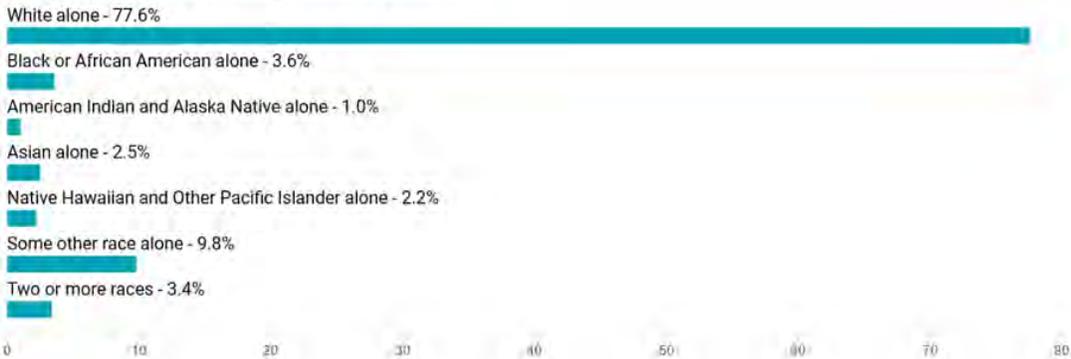
In Benton County, 87.9 percent is white alone and about 12.2 percent other race than white; in Washington County 77.6 percent is white only and 22.4 percent other race than white; and in McDonald County 87.5 percent is white only and 12.5 percent is race other than white. The break-down demographics below show the percentage for each race and ethnic group by county.

Population by Race in Benton County, Arkansas



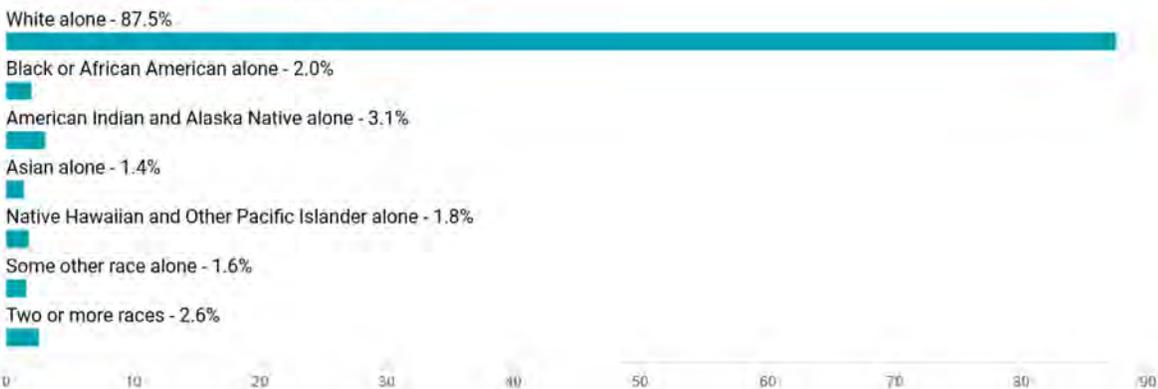
Benton County race estimates – ACS 2018 – 5-Year Estimates

Population by Race in Washington County, Arkansas



Washington County race estimates – ACS 2018 – 5-Year Estimates

Population by Race in McDonald County, Missouri



McDonald County race estimates – ACS 2018 – 5-Year Estimates

Minority Population Trends

The illustrations below show the percent of Latino or Hispanic population in Benton, Washington and McDonald Counties based on the most recent ACS data of 2018 5-year estimates.

Benton County had 49,379 Hispanic population, which represents 17.39 percent of the total county population. Of this percent, the Figures 3.4 illustrates the composition of the Hispanic population by race and ethnicity.

Washington County had 42,263 Hispanic population, which represents 17.79 percent of the total population. Of this percent, Figure 3.5 illustrates the composition of the Hispanic population by race and ethnicity.

McDonald County had 3,091 Hispanic population, which represents 11.99 percent of the total population. Of this percent, Figure 3.6 illustrates the composition of the Hispanic population by race and ethnicity.

In the McDonald County portion of the MPA, most of the population (1,007 in 2010) is white followed by people of Hispanic origin (about 292 in 2010) and Native American (about 35 people in 2010).

Between the past two published decennial Census Bureau's data (2000 and 2010) the two-county regions' (Benton and Washington) total population grew by 36.4 percent while the Hispanic population grew from 26,401 to 65,741 or by 149.0 percent. This data suggests that the Hispanic population continues to increase at a faster rate than the general population. The Census 2010 Hispanic population figure of 65,741 makes up 15.5 percent of the 424,404 two-county total population. This Hispanic total population ratio is higher in the cities of Northwest Arkansas with an 18.4 percent and 26.7 percent ratio for Washington and Benton County Cities respectively.

Another increasing minority group in Benton and Washington Counties is the Native Hawaiian or Pacific Islanders, which would include Marshallese Island immigrants. This population grew from 969 in Census 2000 to 4,799 in 2010. This was a significant 395.25 percent increase for one decade.

The graphics below illustrate the racial and minority population mix as estimated by the 2018 American Census Survey 5-year estimates by county.

Based on the most recent data from the 2010 Census and 2018 ACS we can conclude that while the diversity of the region's population is increasing rapidly, especially in the Hispanic or Latino population group, the total population in absolute numerical terms is still predominantly white.

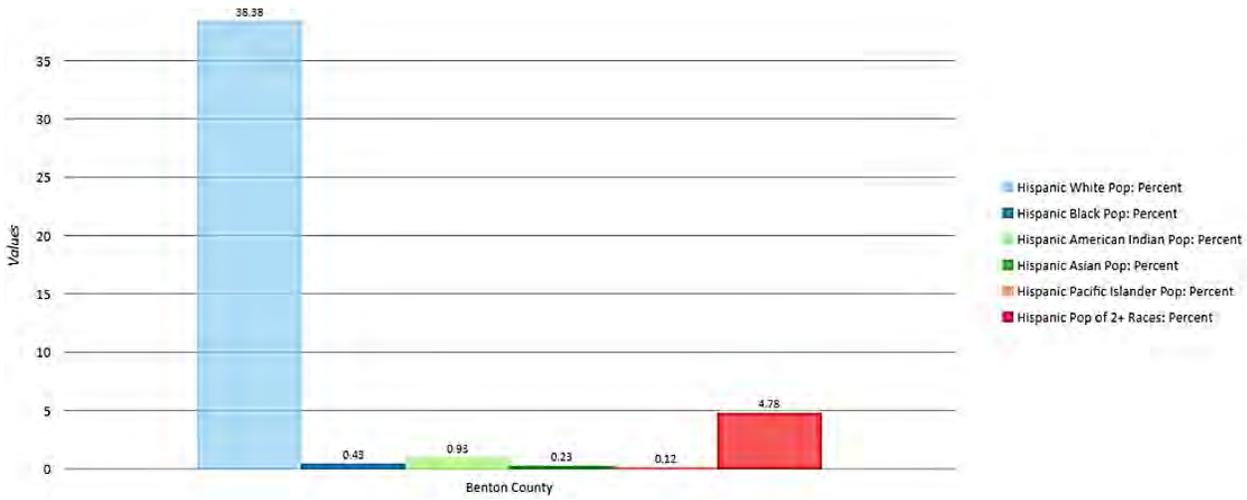


Figure 3.4 - Benton County Hispanic or Latino ethnicity and race estimates 2018 5-Year Estimates

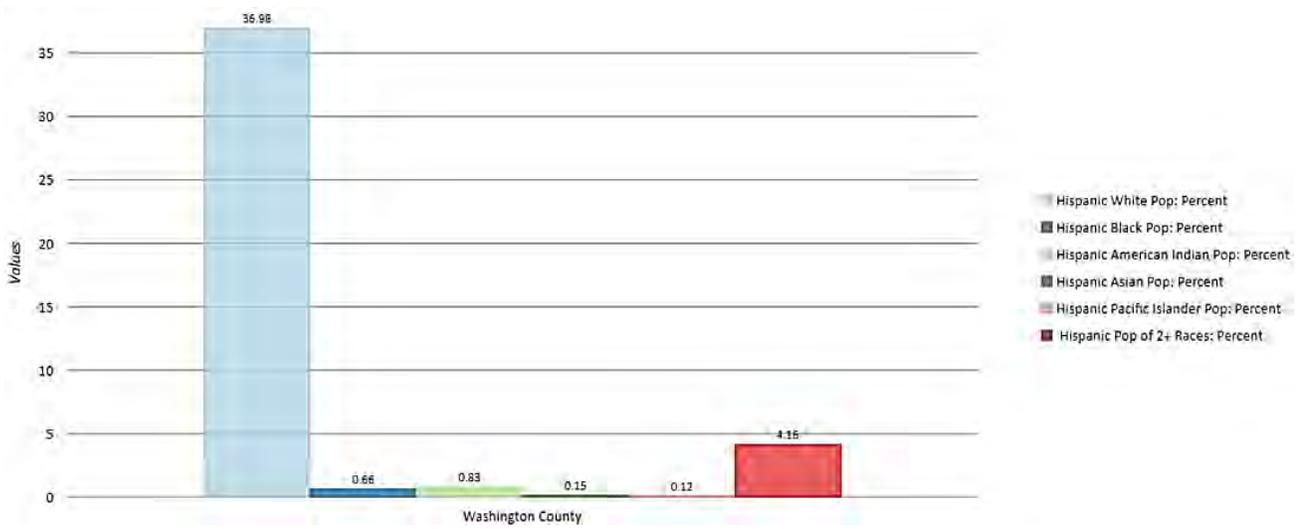


Figure 3.5 - Washington County Hispanic or Latino ethnicity and race estimates 2018 5-Year Estimates

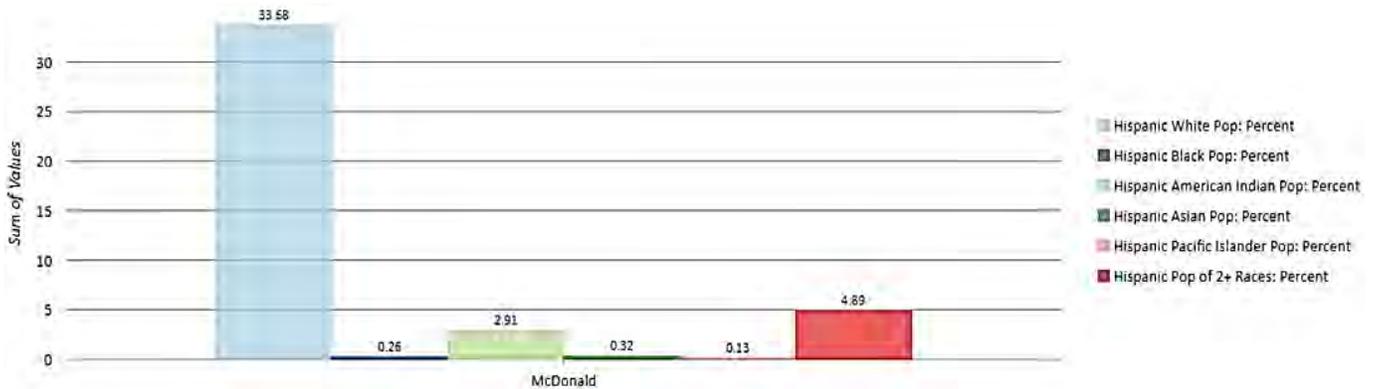


Figure 3.6 - McDonald County Hispanic or Latino ethnicity and race estimates 2018 5-Year Estimates

Nativity and Foreign Born

In 2015-2019, an estimated 88.9 percent of the people living in Fayetteville-Springdale-Rogers, AR Metro Area were U.S. natives. 45.7 percent of the Fayetteville-Springdale-Rogers, AR Metro Area population were living in the state where they were born.

Approximately 11.1 percent of Fayetteville-Springdale-Rogers, AR Metro Area residents in 2015-2019 were foreign-born. 28.8 percent of foreign born were naturalized U.S. citizens and an estimated 74.9 percent entered the country before the year 2010.

Foreign-born residents of Fayetteville-Springdale-Rogers, AR Metro Area come from different parts of the world. The bar graph below displays the percentage of foreign born from each world region of birth in 2015-2019 for Fayetteville-Springdale-Rogers, AR Metro Area.

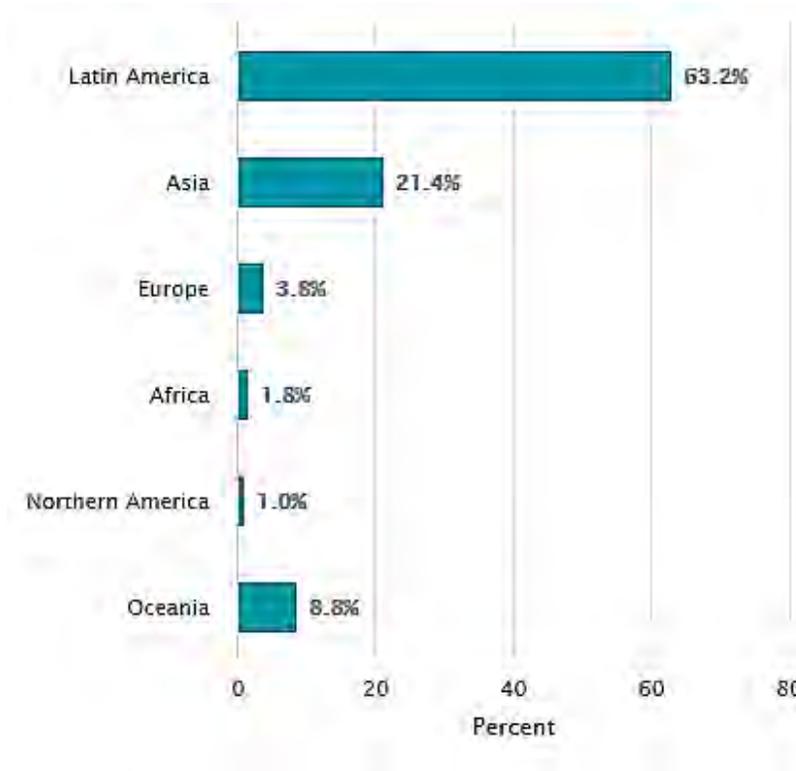


Figure 3.7 - Region of Birth for the Foreign-Born Population in Fayetteville-Springdale-Rogers, AR Metro Area

Language

Among people at least five years old living in Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019, 15.3 percent spoke a language other than English at home. Spanish was spoken by 11.3 percent of people at least five years old; 7.2 percent reported that they did not speak English "very well."

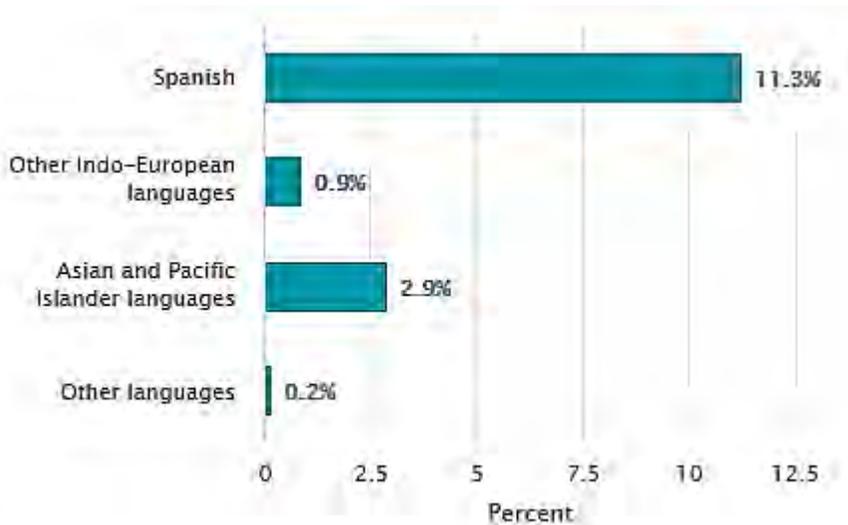


Figure 3.8 - Percent of the Population 5 years and over who Speak a Language other than English in Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019

Housing Inventory Characteristics

In 2015-2019, Fayetteville-Springdale-Rogers, AR Metro Area had a total of 206,826 housing units. Of these housing units, 73.0 percent were single-family houses either not attached to any other structure or attached to one or more structures (commonly referred to as “townhouses” or “row houses”). 21.5 percent of the housing units were in multi-unit structures, or those buildings that contained two or more apartments. 5.4 percent were mobile homes, while any remaining housing units were classified as “other,” which included boats, recreational vehicles, vans, etc.

10.3 percent of the housing inventory was comprised of houses built since 2010, while 3.4 percent of the houses were first built in 1939 or earlier. The median number of rooms in all housing units in Fayetteville-Springdale-Rogers, AR Metro Area was 5.5 rooms, and of these housing units, 65.5 percent had three or more bedrooms.

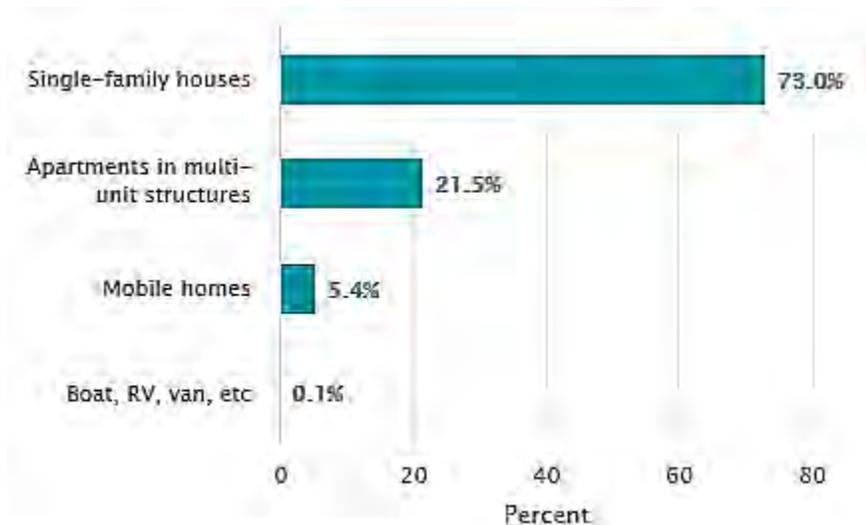


Figure 3.9 - Types of Housing Units in Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019

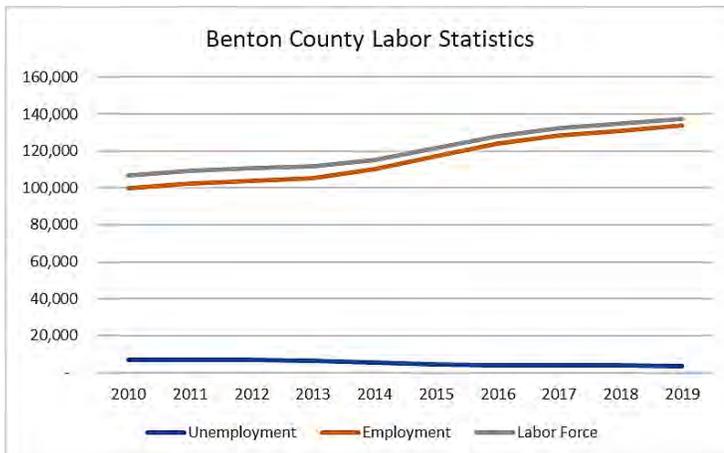
Employment Data and Trends

Given the fact that most jobs require commuting, employment trends are important in helping to predict transportation needs into the future. Employment predictions and commuting patterns are a major part of travel demand modeling. Table 3. shows the region’s labor force growing trend in the nine years and the unemployment rate continuing to decrease after the recession. As can be seen in Table 3. the annual unemployment continuously decreased since 2010 in both Washington and Benton counties. This unemployment rate was lower than other MSA in Arkansas as well as the Arkansas State rate of 6.1 percent and 6.2 percent in the United States in 2014. A historically low unemployment rate may have been a major factor in attracting population into Northwest Arkansas and a relatively low rate should continue to attract migration into the area.

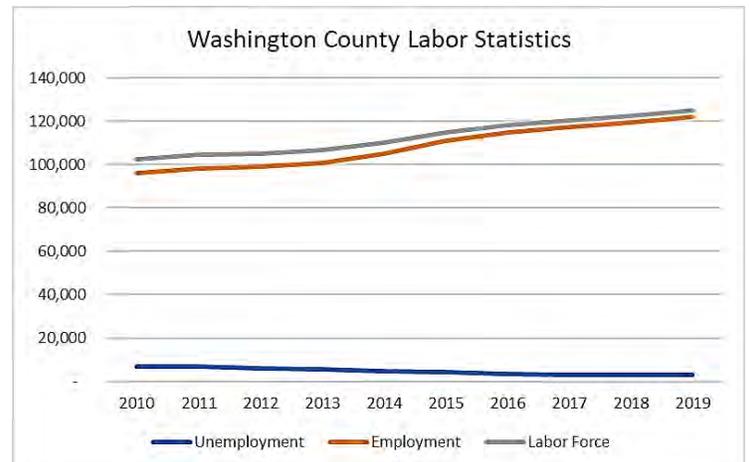
Year	Unemployment	Employment	Labor Force
2010	7,122	99,853	106,975
2011	7,133	102,286	109,419
2012	6,659	103,974	110,633
2013	6,290	105,443	111,733
2014	5,306	109,992	115,298
2015	4,572	117,035	121,607
2016	3,713	124,007	127,720
2017	3,908	128,439	132,347
2018	3,872	130,888	134,760
2019	3,601	133,610	137,211

Year	Unemployment	Employment	Labor Force
2010	6,703	96,021	102,724
2011	6,607	98,067	104,674
2012	5,920	99,336	105,256
2013	5,714	101,019	106,733
2014	4,803	105,238	110,041
2015	4,054	110,974	115,028
2016	3,251	114,945	118,196
2017	3,119	117,465	120,584
2018	3,186	119,442	122,628
2019	3,053	121,914	124,967

Benton County



Washington County



Data Source: Arkansas Department of Workforce Services

Figure 3.10 - Employment Trend in Benton and Washington Counties

To compare, the data in Figure 3.11 are based on the Quarterly Census of Employment and Wages – Annual – Place of Work.

* Note, this graph only includes Benton and Washington County, AR

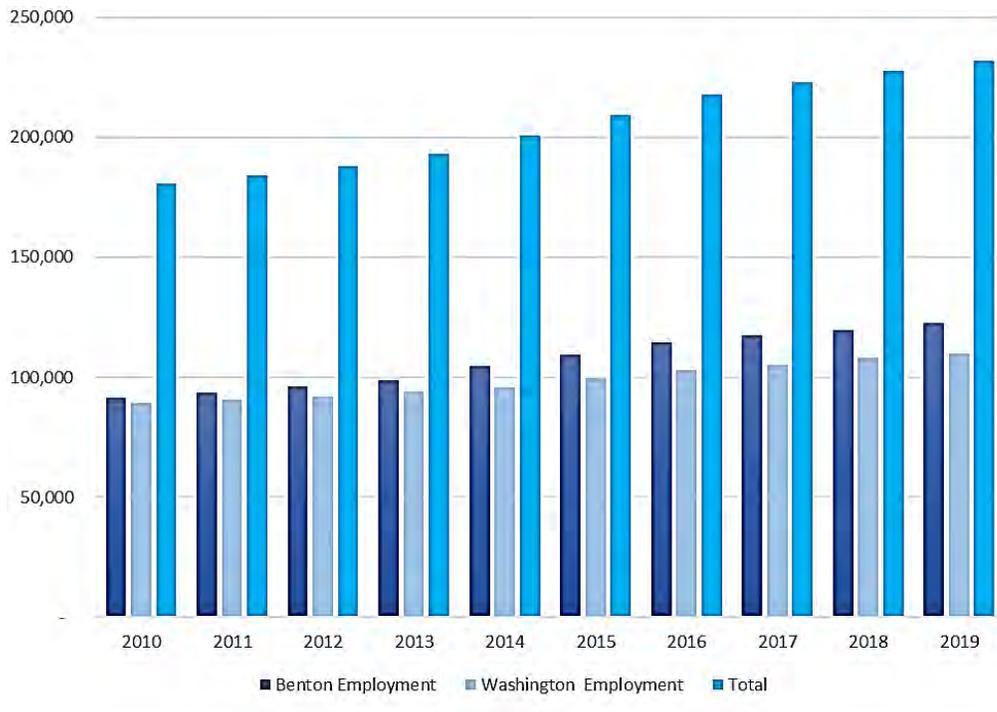
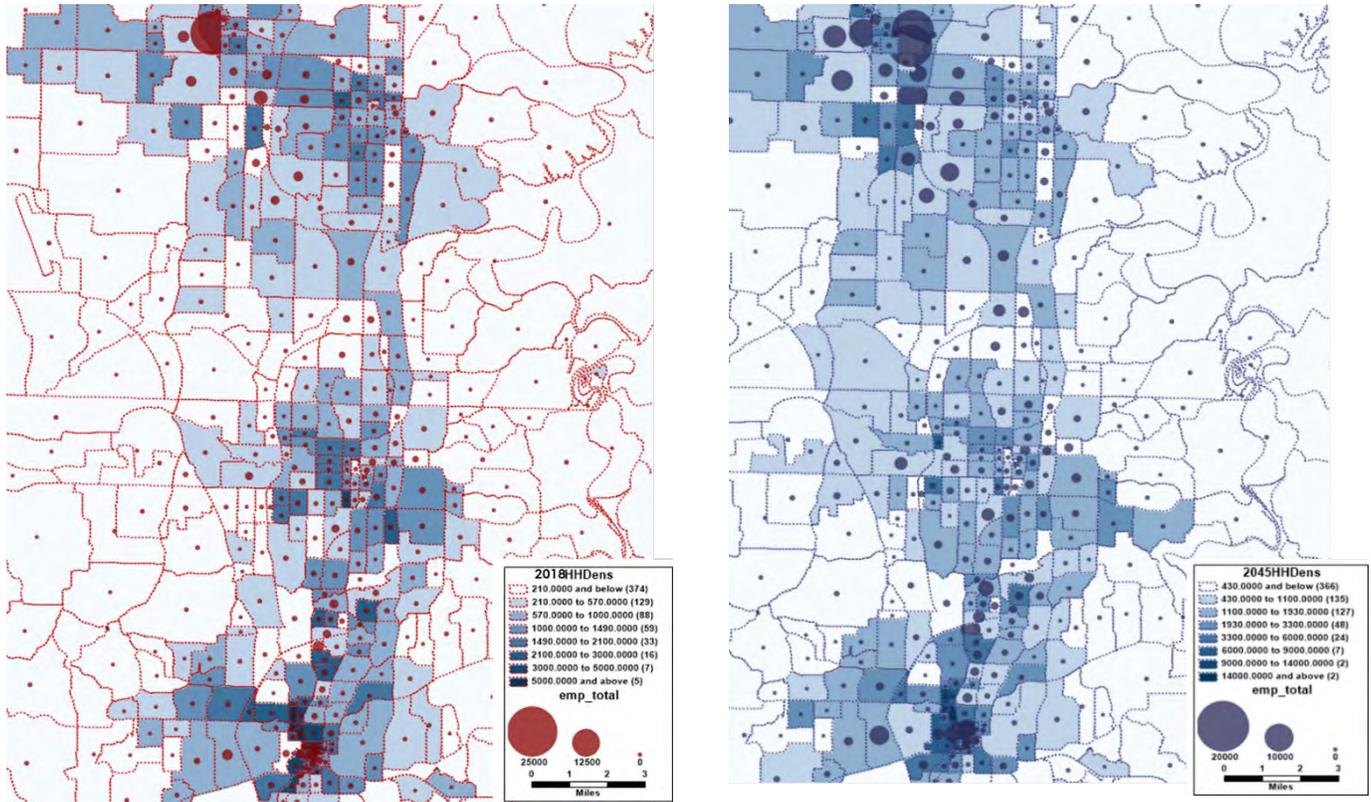


Figure 3.11 - Employment trend based on the 2010-2019 Quarterly Census of Employment and Wages

As Figure 3.11 illustrates, employment numbers have consistently increased since 2010 in both Benton and Washington Counties, with Benton county numbers higher than Washington county.

Maps 3.2 show employment density developed for the 2018 and 2045 Traffic Analysis Zones (TAZ) for the Northwest Arkansas Travel Demand Model. The density of the employment and the largest number of employees in the region are in the urban corridor, along I-49 between south Fayetteville and Bentonville. The largest employers in Northwest Arkansas include the Walmart Stores, Inc. in Bentonville; JB Hunt Transport SVC Inc., in Lowell; Tyson Foods, Inc., in Springdale; and the University of Arkansas in Fayetteville. The urban corridor continues to have the highest density and not surprisingly most of the trips are to be expected to take place between these TAZs and the higher employment and economic activity TAZs.

Population and employment in the area are concentrated within relatively short distances from I-49, the Arkansas-Missouri Railroad and the Razorback Regional Greenway as illustrated below.



Maps 3.2 - Employment density by Traffic Analysis Zones in 2018 and forecasted 2045 per the Northwest Arkansas Travel Demand Model

Employment Status and Type of Employment

In Fayetteville-Springdale-Rogers, AR Metro Area, 62.4 percent of the population 16 and over were employed; 35.3 percent were not currently in the labor force.

An estimated 82.7 percent of the people employed were private wage and salary workers; 11.2 percent were federal, state, or local government workers; and 6.0 percent were self-employed in their own (not incorporated) business.

Class of worker	Number	Percent
Private wage and salary workers	204,825	82.7
Federal, state, or local government workers	27,823	11.2
Self-employed workers in own not incorporated business	14,900	6.0

In 2015-2019, the civilian employed population 16 years and older in Fayetteville-Springdale-Rogers, AR Metro Area worked in the following industries:

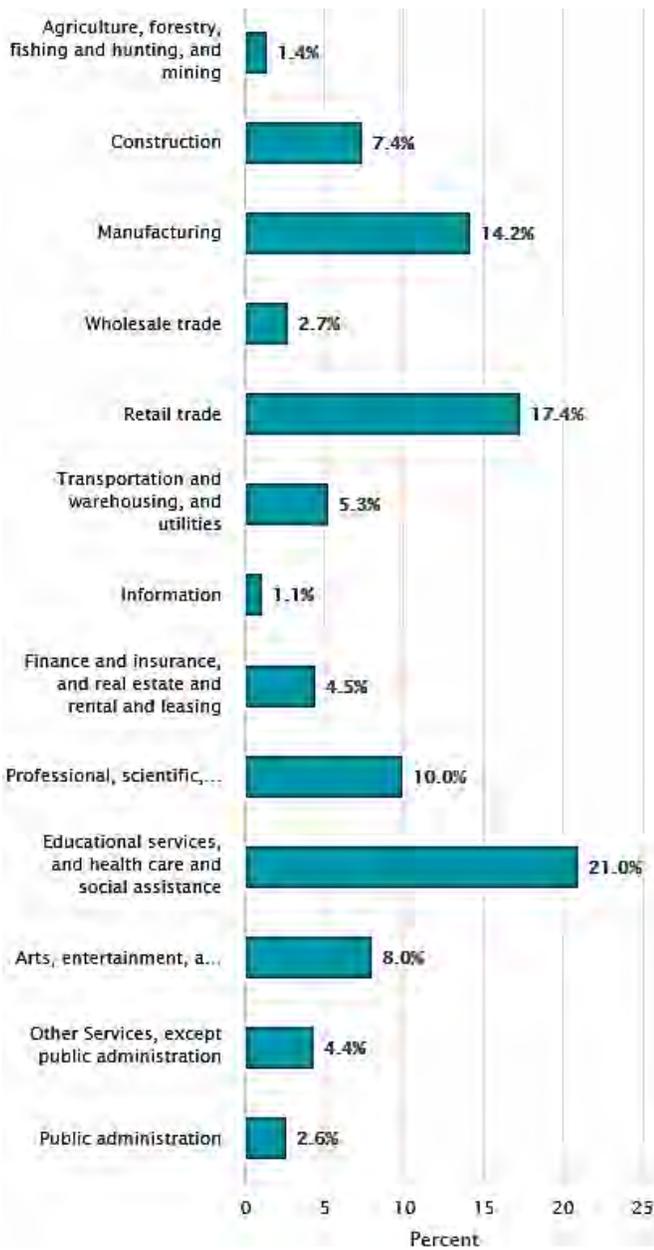


Figure 3.12 - Industries in the Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019

Figure 3.12 illustrates the wide variety of industries present in the MSA region, with the educational services, health care and social assistance being the highest (at 21 percent) followed by the retail trade (17.4 percent) and the manufacturing sector at 14.2 percent. The sectors with the smallest percent are information and agriculture, forestry, fishing and hunting, and mining.

Occupations

In terms of occupations of civilian population in the MSA, the highest percent of employed population 16 years and over are in management, business, sciences and arts occupations (38.1 percent) and sales and office occupations (22.1 percent) as illustrated in the table below.

Civilian employed population 16 years and over	Number	Percent
Management, business, sciences, and arts occupations	94,302	38.1
Service occupations	36,824	14.9
Sales and office occupations	54,656	22.1
Natural resources, construction, and maintenance occupations	22,839	9.2
Production, transportation, and material moving occupations	39,201	15.8

Vehicles Available

According to the ACS 2019 one-year estimate there were 253,953 workers 16 years and over in households in the MSA. Of these only 1.7% had no vehicle available while approximately 80 percent of workers had 2 or more vehicles available while. Figure 3.13 illustrates vehicles available in the MSA.

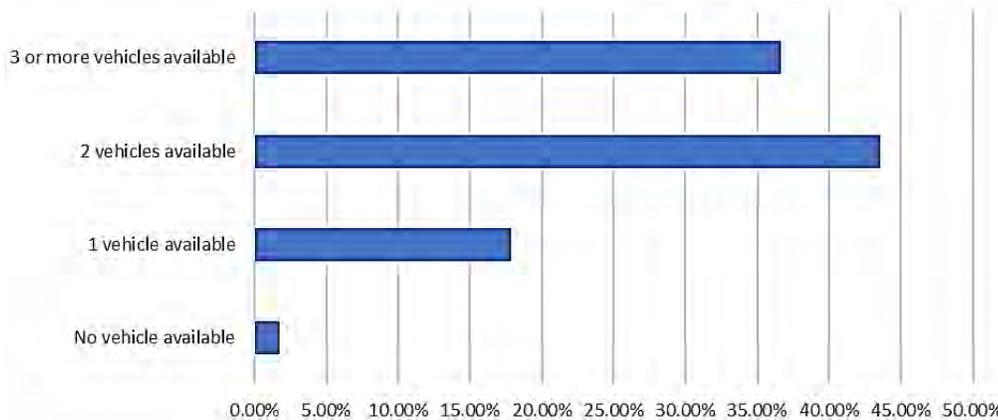


Figure 3.13 - Vehicles available by Occupied Household Units

Commuting to Work – Means of Transportation

An estimated 82.0 percent of Fayetteville-Springdale-Rogers, AR Metro Area workers drove to work alone in 2015-2019, and 10.9 percent carpoolled. Among those who commuted to work, it took them on average 20.9 minutes to get to work.

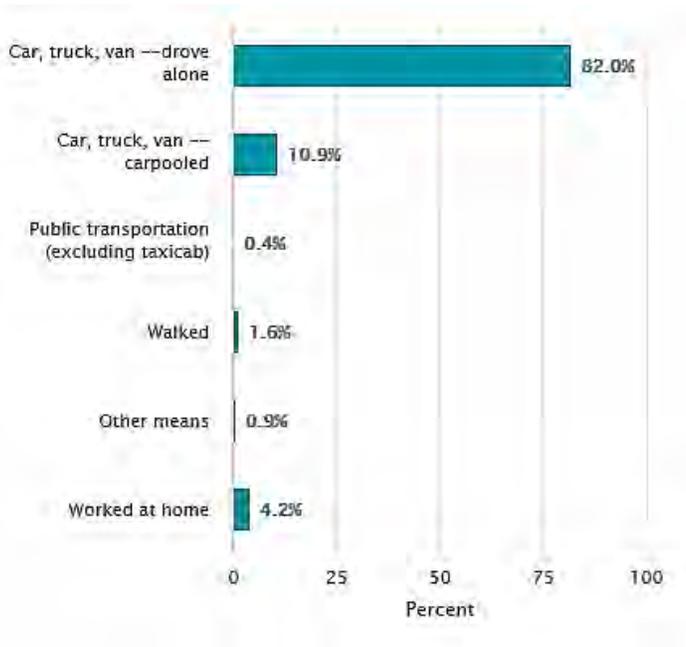


Figure 3.14 - Percent of Workers 16 and over Commuting by Mode in Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019

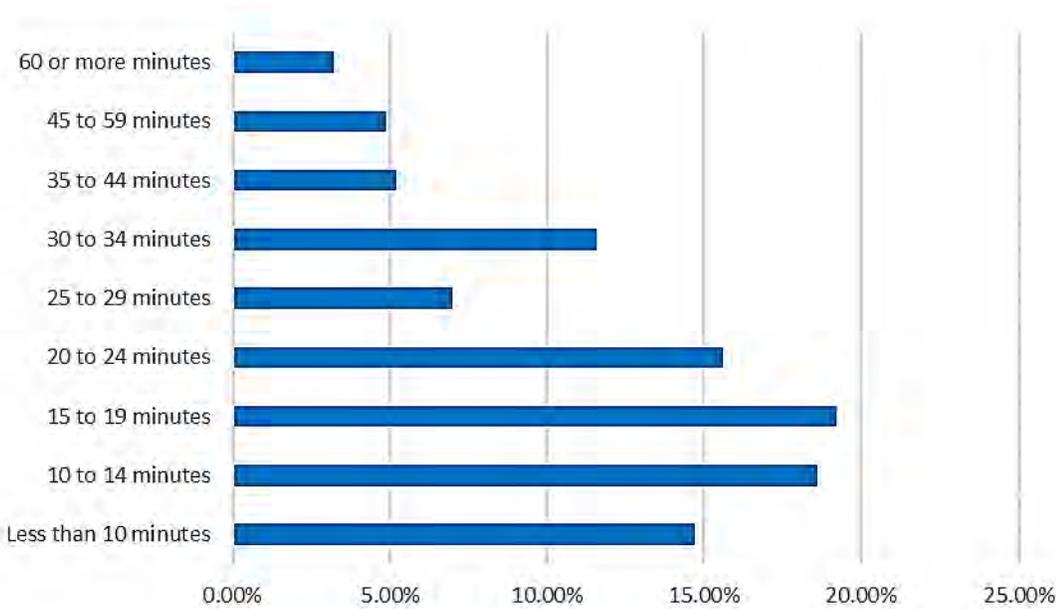


Figure 3.15 - Percent of Workers 16 and over Travel Time to work in Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019

In the Fayetteville-Springdale-Rogers, AR MSA Figure 3.15 shows the travel time to work for workers 16 years and over who did not work at home based on the 2015-2019 ACS data. As it can be observed from the graphic above, almost 40 percent of the workers spend 10-19 minutes to get to work followed by the group of workers who spend 20-24 minutes to reach their workplace, a little more than 15 percent. Only about 3 percent spent 60 or more minutes commuting to work. The mean travel time to work was 20.9 minutes.

Income

The median income of households in Fayetteville-Springdale-Rogers, AR Metro Area was \$57,603. An estimated 5.8 percent of households had income below \$10,000 a year and 6.6 percent had income over \$200,000 or more.

Household Income in Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019

Median earnings for full-time year-round workers was \$42,410. Male full-time year-round workers had median earnings of \$46,525. Female full-time year-round workers had median earnings of \$37,627.

An estimated 80.8 percent of households received earnings. An estimated 26.9 percent of households received Social Security and an estimated 14.3 percent of households received retirement income other than Social Security. The average income from Social Security was \$20,037. These income sources are not mutually exclusive; that is, some households received income from more than one source.



Figure 3.16 – Household Income in Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019

Poverty and Participation in Government Programs

In 2015-2019, 12.8 percent of people were in poverty. An estimated 15.6 percent of children under 18 were below the poverty level, compared with 8.0 percent of people 65 years old and over. An estimated 12.6 percent of people 18 to 64 years were below the poverty level.

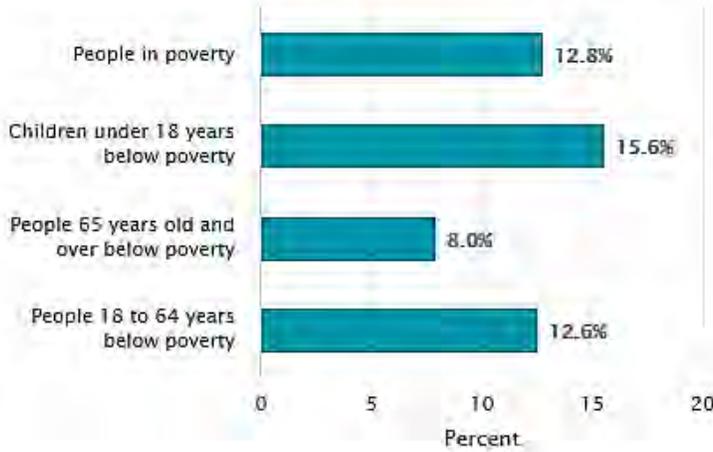


Figure 3.17 – Poverty Rates in Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019

In 2015-2019, 6.2 percent of households received SNAP (the Supplemental Nutrition Assistance Program). An estimated 57.2 percent of households that received SNAP had children under 18, and 24.9 percent of households that received SNAP had one or more people 60 years and over. An estimated 32.2 percent of all households receiving SNAP were families with a female householder and no husband present. An estimated 28.3 percent of households receiving SNAP had two or more workers in the past 12 months.

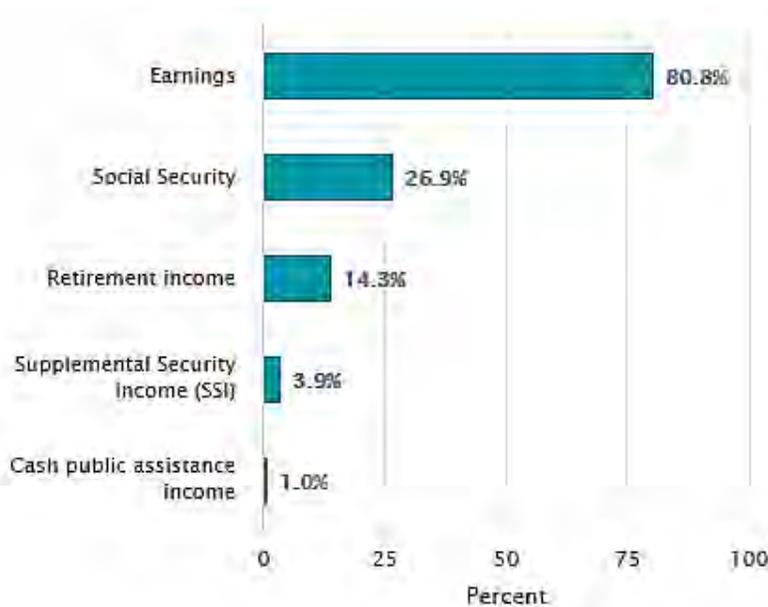


Figure 3.18 – Proportion of Households with Various Income Sources in Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019

Health Insurance

Among the civilian noninstitutionalized population in Fayetteville-Springdale-Rogers, AR Metro Area in 2015-2019, 89.8 percent had health insurance coverage and 10.2 percent did not have health insurance coverage. Private coverage was 68.7 percent and government coverage was 30.8 percent, respectively. The percentage of children under the age of 19 with no health insurance coverage was 6.5 percent.

HOUSING

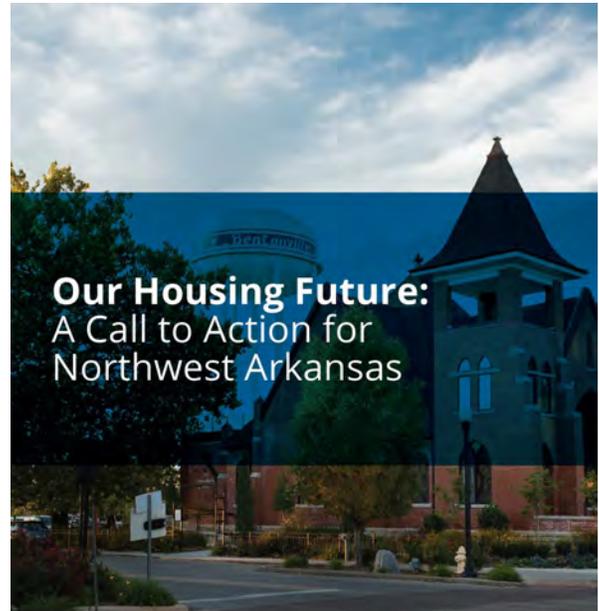
In 2018, through a grant from the Walton Family Foundation, NWARPC partnered with the University of Arkansas' Center for Business and Economic Research and the consulting firm Enterprise Community Partners to conduct a housing study within the Fayetteville-Springdale-Rogers Urbanized Area. The purpose of the study was to assist the region's planning partners to better understand how high performing regions like Northwest Arkansas can develop housing strategies that would leverage housing with future investments in alternative transportation, education, arts, and open space.

NWARPC, the Center of Business and Economic Research, and Enterprise Community Partners worked together to provide public outreach and community engagement, data collection, and coordination with NWARPC member jurisdictions and the public to develop a report entitled "Our Housing Future: A Call to Action for Northwest Arkansas." The full report can be found [at this link](#).

As Northwest Arkansas plans, housing and transportation must be key components in the planning process. While Northwest Arkansas is prosperous by multiple measures, many residents cannot afford what most people consider necessities, such as a car or quality childcare or even an affordable home. In fact, housing is becoming increasingly inaccessible to the region's workers, families, and seniors.

- Household income growth has lagged rising rent and for-sale home prices in three of the region's four largest cities in the last several years.
- Regional employers have started expanding their facilities to less costly areas partly due to a limited supply of homes affordable to their workers in the region.
- On any given night, nearly 2,500 people in Northwest Arkansas (including more than 1,000 children) lack a permanent place to live.

The report is also a call to action. Swift regional and local action is needed to meet the immediate needs of families who have lost their homes or are struggling to find one they can afford. Action must also address future needs, with nearly 80,000 families projected to move to Northwest Arkansas' four largest cities—Bentonville, Fayetteville, Rogers and Springdale— by 2040. By then, to accommodate and continue to propel the region's growth, approximately half of new homes in Northwest Arkansas must serve workforce households (a family of four earning \$33,000 to \$78,000) and the lowest-income households (a family of four earning less than \$33,000).



WALTON FAMILY
FOUNDATION

Through extended community engagement, residents and regional stakeholders consistently identified the four most urgent housing challenges facing Northwest Arkansas over the next decade: 1) lack of a regional housing policy, 2) need for diverse housing options, 3) limited choices for low-income households, and 4) weak links between housing and transportation options.

TEN YEARS, FIVE CRITICAL ACTIONS

Because Northwest Arkansas is an interconnected network of communities, solutions to the most pressing housing challenges require a regional approach. Leaders across the region must take five critical actions within the next 10 years to meet current and future challenges – and strengthen the region’s housing delivery system:

1. Establish a regional housing compact.
2. Create a regional housing trust fund.
3. Introduce development incentives to spur participation in regional and local housing initiatives.
4. Use publicly owned land for housing production.
5. Expand and leverage federal, state and local resources for affordable and workforce housing.

Success depends on coordinated leadership and partnership across the public, private and philanthropic sectors. At the same time, each sector has a unique role to play:

- The public sector can remove development barriers, create effective policies, and expand resources for housing-related work.
- Philanthropy can use its convening power, influence, and programmatic investments to advance affordable and workforce homes.
- The private sector, including nonprofits, community organizations, financial institutions, developers and employers can lend their technical expertise and build support for new approaches and more resources through advocacy and coalition-building.

Working together, the region must act now to build a stronger housing system – and make a long-term commitment to creating affordable, inclusive places to live in Northwest Arkansas. By making a clear, strong commitment to create a stronger housing delivery system, Northwest Arkansas can establish the tools, capacity and public support needed to secure its housing future and address the immediate needs facing many of its residents today and over time. Choosing where to live is one of your most important life decisions. Where you live matters to your quality of life:

- Commute time to work.
- Access to public transportation.
- Convenience of shopping and services.
- Neighborhood schools and family activities.
- Community amenities, like parks, swimming pools, bike trails and sports fields.
- Monthly expenses and financial security.



The Northwest Arkansas region is growing, with new residents arriving every day to fill local jobs and contribute to the regional economy. Developing a regional housing approach is critical to ensuring that communities in Northwest Arkansas increase access to opportunity through housing investments and related policies. Creating great neighborhoods with high-quality housing creates pathways to opportunity for everyone.

Summary of Demographic Factors

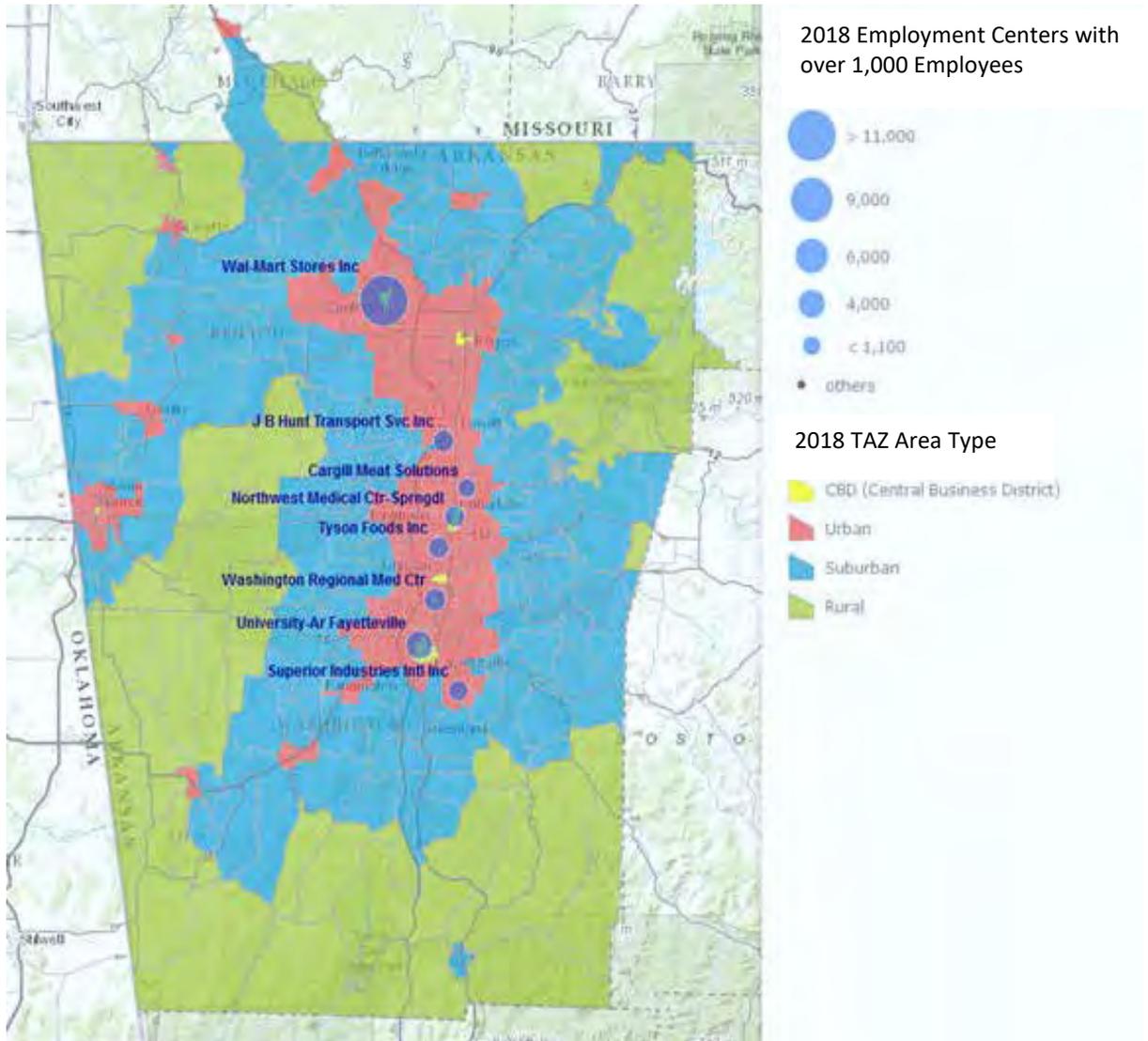
The population information and data analysis in this chapter indicate three major regional growth trends:

1. The population in Northwest Arkansas continues to steadily increase. For over 30 years, the region sustained the highest population growth rate of any two-county region in Arkansas. Population projections through the year 2045 are based upon the region's demonstrated growth from 1990 through 2010 as recorded by the Decennial Census data and by the Census American Community Survey data. There are several factors, such as relocation of major employers, which could very possibly prevent a repeat of the exceptional growth that took place in the past. However, there are no indications that such occurrences should happen soon. Having said that, regional governments and institutions must be prepared for the possibility of even more growth in the future. Should the rate of growth significantly change, new projections will reflect these changes.
2. The building permit figures, and regional development trends show that there is a significant western growth pattern in the two-county area. The city boundary change map reveals that cities such as Bentonville, Centerton, Highfill, Springdale, Fayetteville and Tontitown continue to annex land to the west. These annexations, along with the development of water and sewer capacity in these areas, suggest that the western urban development will continue. This rapid growth of population to the west creates demand regarding local finances, infrastructure facilities, and the environment. The region will need to meet these challenges by implementing conventional road improvements as well as planning for alternative transportation. Future growth will likely require a more connected, reliable, and efficient transportation system through the development of alternate modes of transportation, the use of new developments in ITS, and by employing a strategy to address congestion and efficiently use travel demand management.
3. The changing demographic makeup of the Northwest Arkansas population. Aging population may have a growing need for public transit or other forms of transportation to maintain mobility. Another changing demographic is the growing Hispanic and Marshallese Islander populations. These populations may also have different mobility needs, as well as environmental justice concerns. Increasing access to alternative forms of transportation, including transit, can reduce commuting costs for residents and improve air quality by reducing the number of vehicle miles traveled. Transit readiness and access to transit for all residents of Northwest Arkansas is discussed in detail in Chapter 11- Public Transportation of this plan and also in the [Connect Northwest Arkansas 10-Year Transit Development Plan](#).

LANDUSE

As part of the Northwest Arkansas Travel Demand Model upgrade, the area type for the MPA was calculated utilizing an algorithm that considered population and employment density thresholds. The area type classifications resulting from this analysis include the following: Central Business Districts (CBD), Urban, Suburban and Rural Areas.

Map 3.3 illustrates this classification along with locations of the largest employers in the MPA. It is noticeable from the map that the development still occurs to the western part of the urban corridor with more defined expansions as fringes to northwest as well as to the southwest. If the existing major employment centers continue to be concentrated within the urban corridor and along I-49, planners need to concentrate their efforts in analyzing the transportation demands in the near- and long-term future.



Map 3.3 - Employment Centers with over 1,000 Employees in the MPA and Area Type by TAZ

Northwest Arkansas City Boundaries Changes

The change in city boundaries shown in Figure 3.19 and Map 3.4 were based on the Census Bureau’s ACS 2015-2019 5-year average data estimates. The data shows generally a continuous growth of the incorporated cities area, with a notable increase from 2015 for several cities including Bentonville, Rogers, Springdale, as well as Centerston, and Gravette (from the smaller size cities category). Data also shows that a relatively larger portion of Benton County rural area has been annexed over the same time than in Washington County.

Northwest Arkansas has experienced increasing economic growth in the past 30 years as can be observed from the series of maps in Figure 3.20. The maps illustrate land cover change from 1992 to 2016 based on the National Land Cover Database (NLCD). The developed land can be easily depicted as it continues to expand in the urban corridor as well as other communities out in the western portion of the two-county area. As the region continues to grow with new residential and commercial development, it is important to ensure that this growth does not impact key natural cultural and historic resources that make the region unique and attractive.

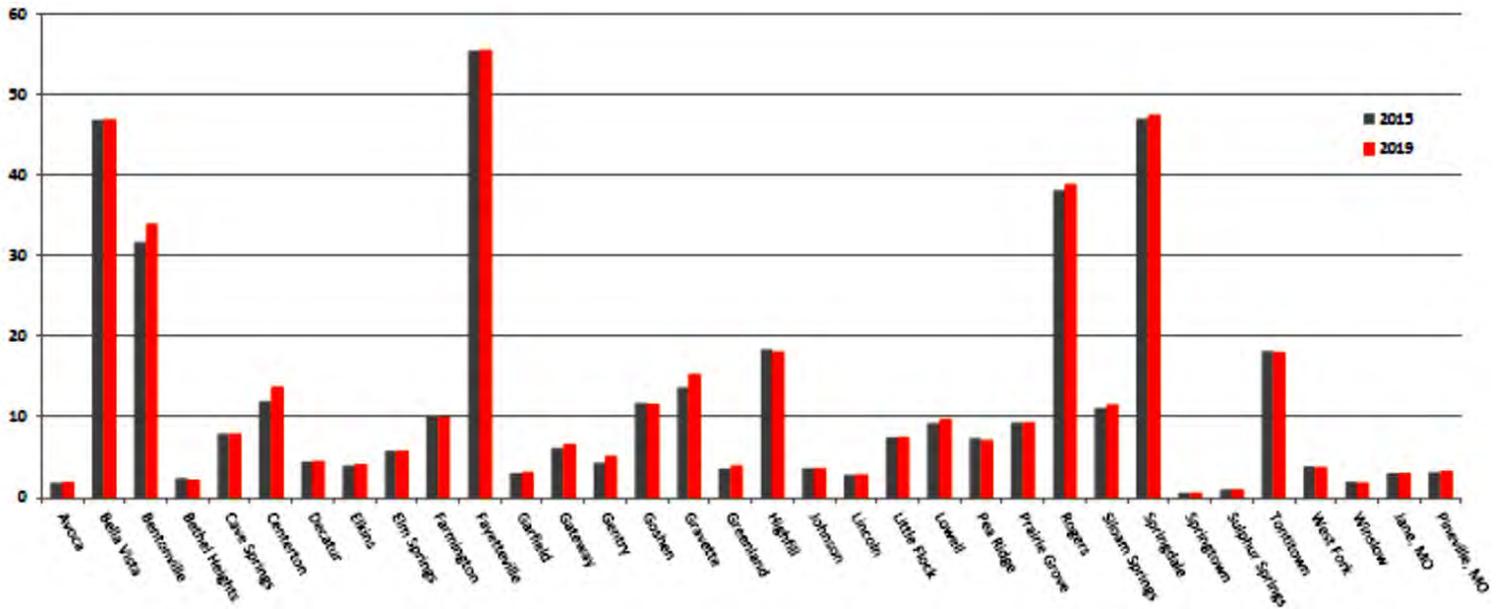
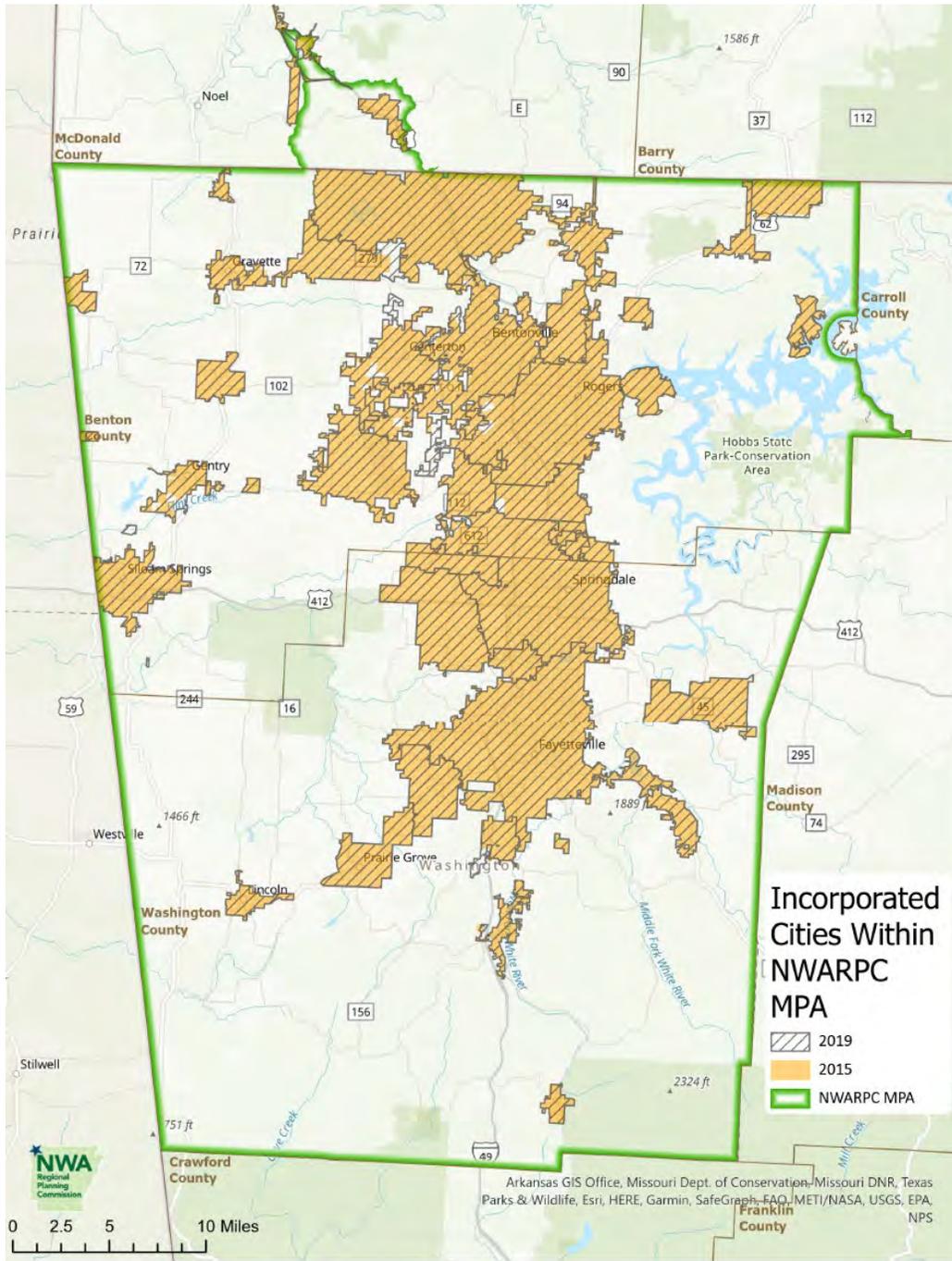


Figure 3.19 - City Limits Change in square miles in the MPA based on the ACS Data 2015-2019



Map 3.4 - Incorporated City Limits for the MPA – Data source: ACS 2015-2019

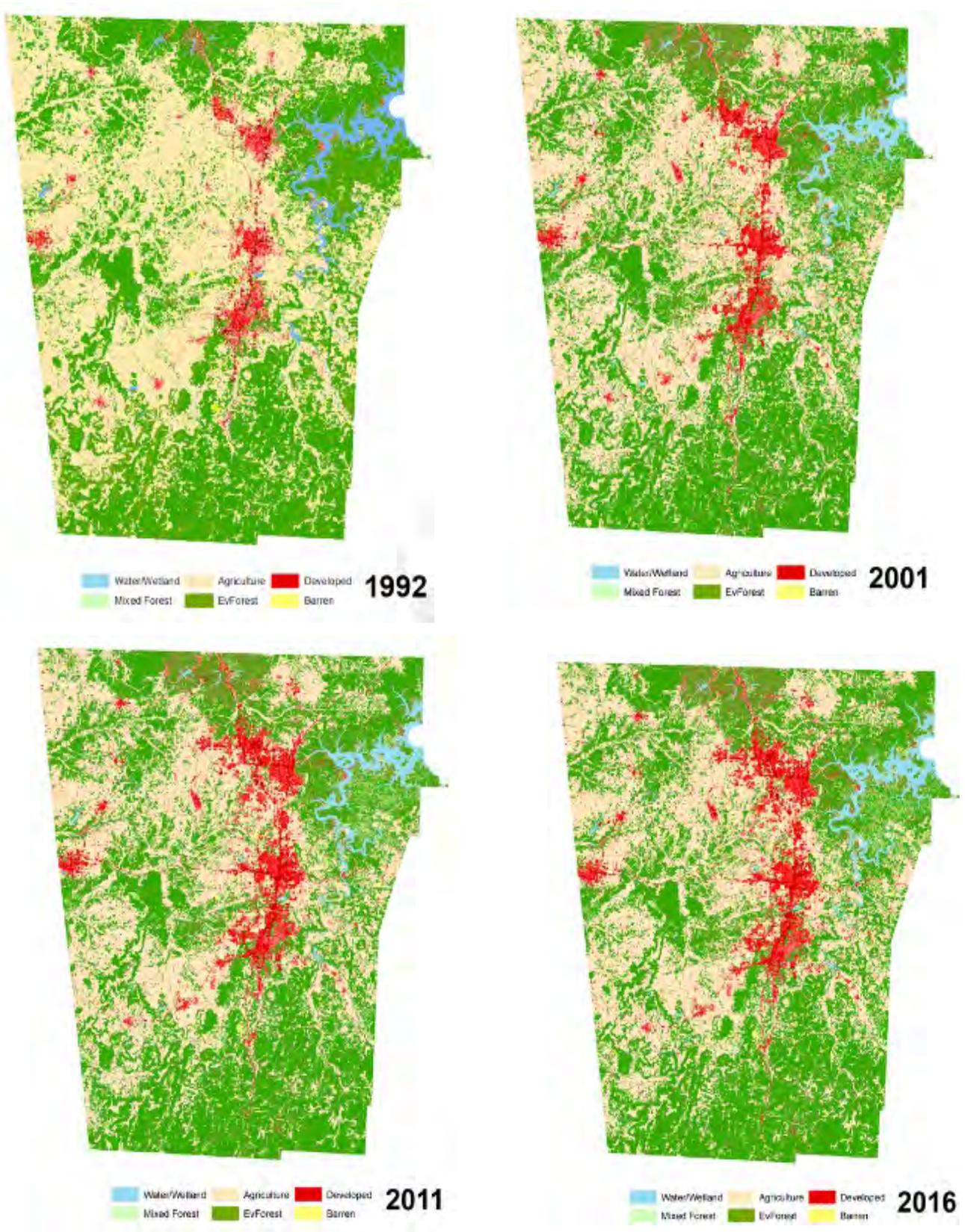


Figure 3.20 - Land Cover Change in Benton and Washington Counties – Data Source: National Land Cover Database (NLCD) 1992-2016



CHAPTER 4. PUBLIC INVOLVEMENT AND INPUT

The NWARPC has established a proactive public involvement process in the planning of regional transportation projects through the Public Participation Plan (PPP). The PPP was adopted in 2007, with an update approved in September 2014 and October 2020, as part of the 2045 MTP update. The full document can be viewed [at this link](#).

The PPP sets out the process by which the MTP, and other documents, will accomplish public outreach throughout the development process. The PPP outlines procedures that are designed to promote and encourage public participation and involvement in the transportation planning process.

The MTP update officially began in the fall 2018, however, public engagement and involvement began in fall 2017 with the first of a series of educational public events. Events, newspaper articles, surveys, legal notices, flyers, and other forms of public notification and involvement continued up to the adoption of the NWARPC 2045 MTP in March 2021.

The year 2020 brought a halt to all in-person public meetings, events, etc., due to the corona virus and COVID-19 pandemic and health emergency. NWARPC continued to notify the public of virtual public engagement meetings and events.

A transit development plan update was held in tandem with the MTP update. Numerous public events were held that helped gather public opinions and input.

The TAC was actively involved in the many community outreach events that took place during the development of the MTP. The TAC met in advance of input sessions to understand what information would be shared, attended the public input sessions to hear the issues and concerns of the citizens first hand and, finally, met after the events to make technical recommendations, which reflected the input of the meeting participants. All TAC recommendations were forwarded to the RPC/Policy Committee for formal approval or adoption.

Community involvement, input, and engagement is necessary as a way to gage public sentiment and to mold and inform the development of MTP goals and recommendations.

“We urgently need to plan a mass transit system to avoid the problems plaguing other cities on the coast, such as traffic, sprawl inhibiting fiscally solvent growth, and lower quality of life.”

“Highway 112 needs to be widened to 4/5 lanes from Fayetteville to Bentonville as soon as humanly possible.”

“It is time to look towards the future and design our communities for car ownership to be optional.”

“Better include multiple modes of transportation in the road planning process.”

“A major concern is elderly and disabled who are unable to drive having a way to get around in the area.”

– Public Comments

PERFORMANCE MEASURES

Successful measures of the effectiveness of the PPP requires tracking outreach activities and establishing initial baseline measurements. Reasonable effort will be made to regularly measure and evaluate NWARPC efforts to engage the public.

The following performance measures are intended as a starting place to develop performance measures that are appropriate for a wide variety of projects, including long-range transportation plans and transportation improvement programs.

The first performance measure, Measuring Participation Opportunities and Participants, is designed to track *what* opportunities were available and *who* was involved in public participation efforts. The second performance measure, Measuring Public Exposure to Transportation Issues, attempts to measure *how* the public learns of transportation issues and public participation opportunities. Measuring Public Sentiment is the third performance measure and is intended to link public transportation sentiments to fulfillment of MTP goals.

A. PERFORMANCE MEASURE – MEASURING PARTICIPATION OPPORTUNITIES AND PARTICIPANTS

TARGET #1 – To hold as many events as possible throughout the MPA.

➤ **METRIC** – Number and type of public involvement events held.

Note: Due to the coronavirus pandemic, in-person events were discontinued indefinitely in March 2020.

DATE	EVENT/TECHNIQUE	NUMBER
March 2018	Origin/Destination Survey	1,080 surveys
October 2018- August 2019	Mobility Speaker Series (6 sessions)	463 people
April 2019	Connect NWA-TDP Public Involvement Events (10 Events*)	
Spring/Summer/Fall 2019	Connect NWA-TDP Surveys (paper and online)	1,299 surveys
October 2019	2045 MTP Open Houses (2)	100 people
Fall 2019	2019 NWA Regional Transportation Survey (paper and online)	835 surveys
October 2019-July 2020	2045 MTP Survey (paper and online)	378 surveys
October 2020-July 2020	Social media outreach	1,797 people

*Due to the nature of these events, such as farmer’s markets, Cinco de Mayo, First Friday, and the Marshallese Festival, there was no way to quantify the number of people attending.

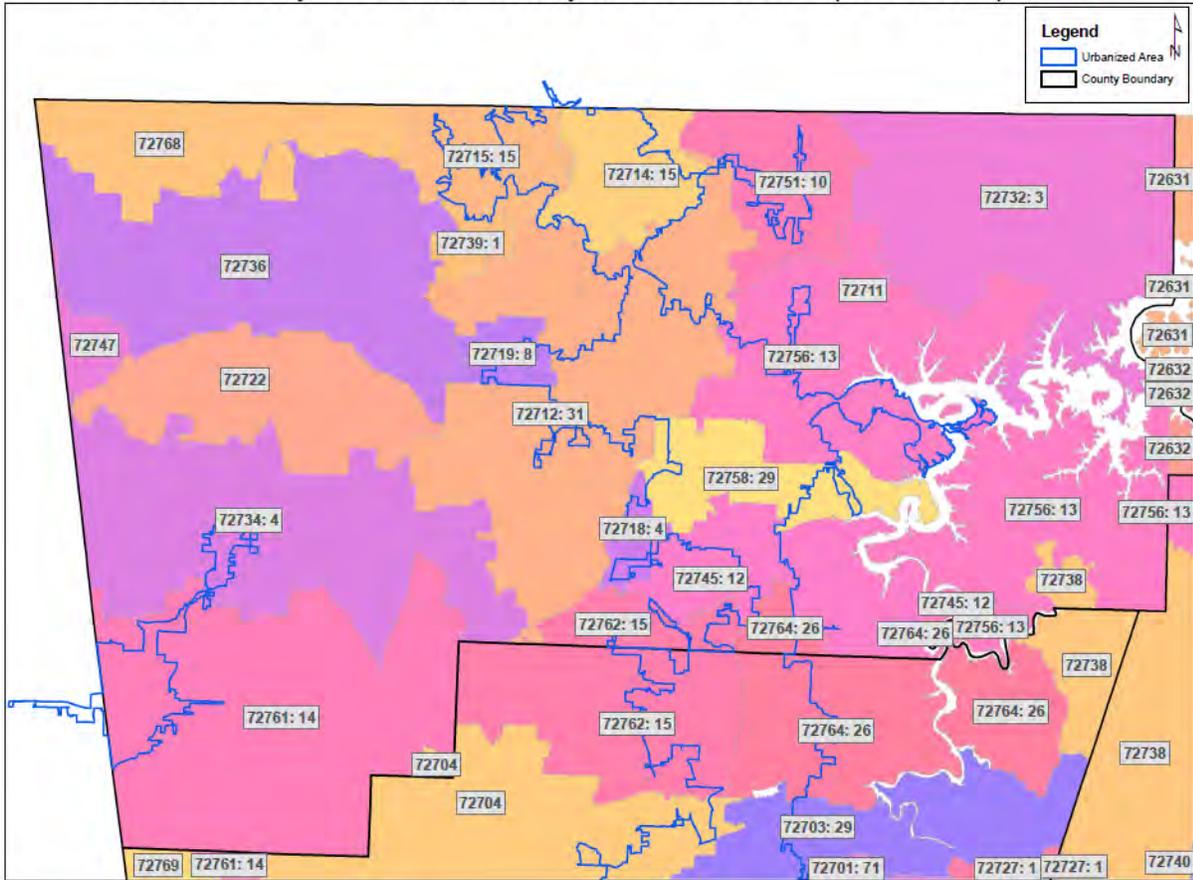
TARGET #2 – To reach all the zip codes in the MPA.

- **METRIC** – Attendance at physical public meetings by zip code.

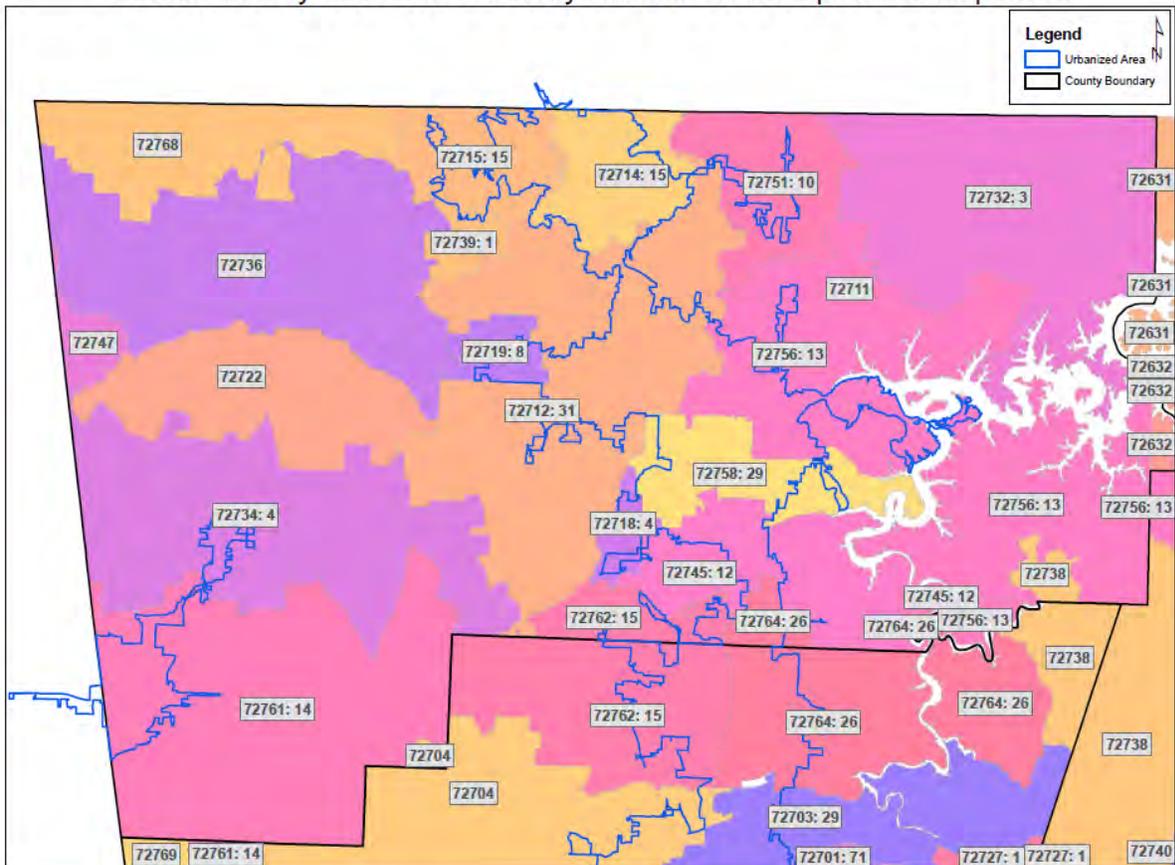
This metric was modified for inclusion in the MTP. Completed 2045 MTP surveys were used as opposed to attendance at meetings (due to the coronavirus pandemic).

HOME ZIP	NUMBER	WORK ZIP	NUMBER
72701	71	72701	83
72702	39	72702	2
72703	29	72703	25
		72704	5
		72705	1
72712	31	72712	82
		72713	2
72714	15	72714	3
72715	15	72715	5
		72716	2
72718	4	72718	3
72719	8	72719	1
72727	1		
72728	3		
72730	4	72730	2
72732	3		
72734	4	72734	2
72739	1		
		72740	2
72744	1		
72745	12	72745	9
72751	10	72751	3
72752	2	72752	1
72753	6	72754	1
72756	13	72756	24
72758	29	72758	15
		72760	1
72761	14	72761	7
72762	15	72762	13
72764	26	72764	36
72773	1	72773	1
72774	4	72774	2
		73756	1
		71712	2
		72626	3
		72671	2

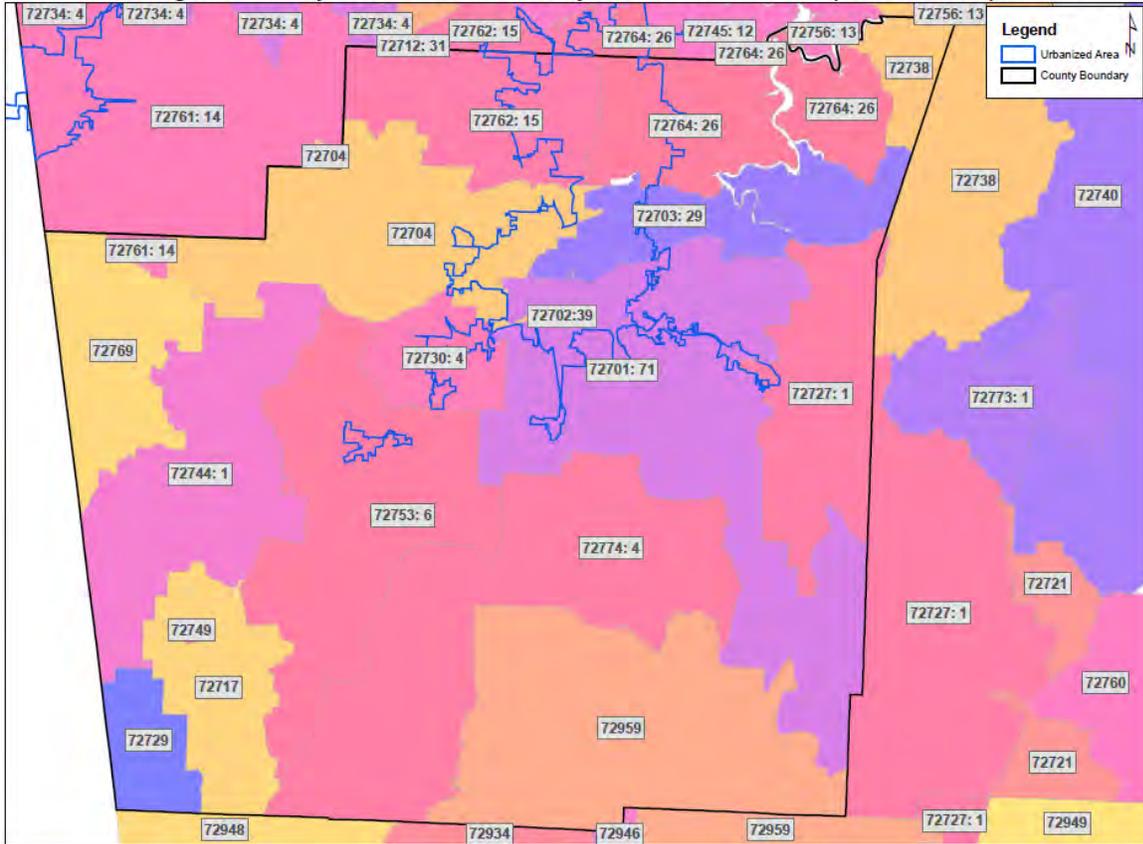
Benton County - 2045 MTP Survey Results - Home Zip Code Responses



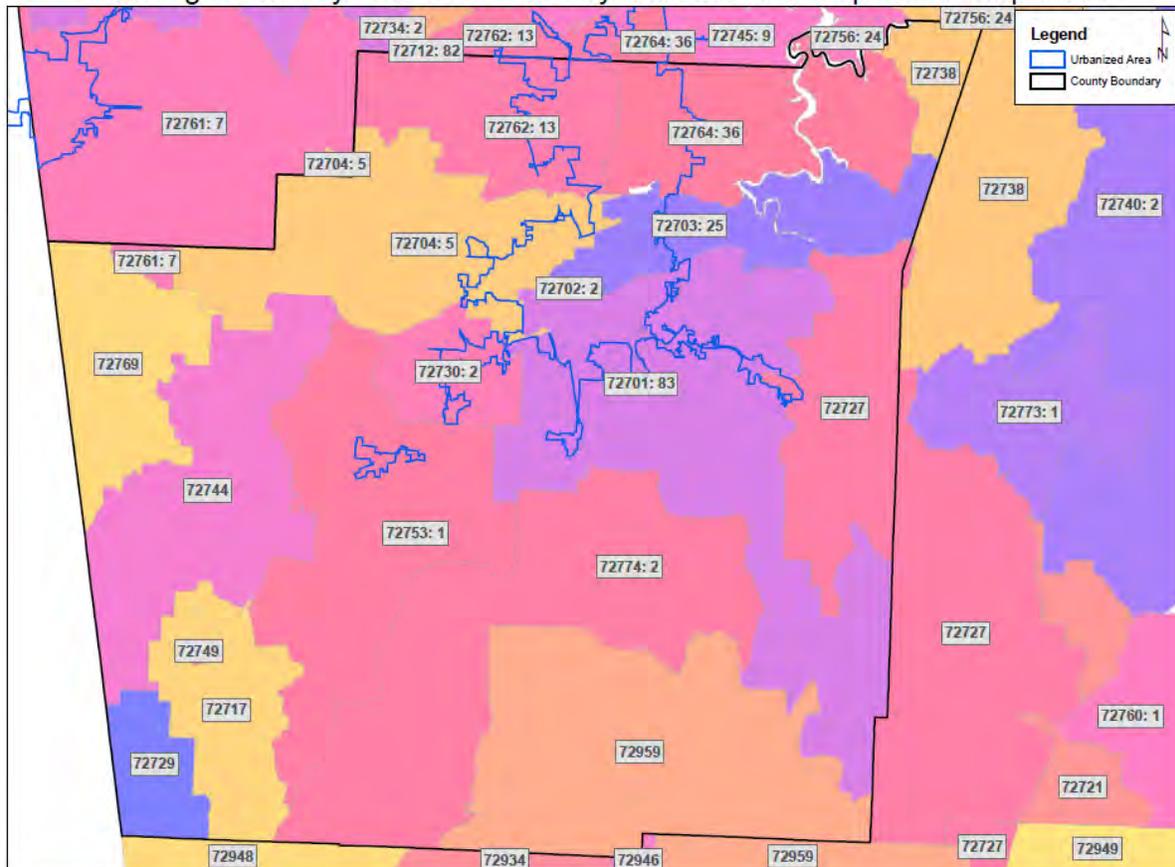
Benton County - 2045 MTP Survey Results - Work Zip Code Responses



Washington County - 2045 MTP Survey Results - Home Zip Code Responses



Washington County - 2045 MTP Survey Results - Work Zip Code Responses



Many of the survey respondents lived and worked within zip codes that were at least partially in the Urbanized Area; however, since individual addresses were not recorded, it is impossible to calculate exactly how many. What is evident in the above maps, is that very few people from outlying zip codes (rural) filled out a survey. This could mean that the issues in the MTP, due to their metropolitan nature, are of no interest to people living in the rural areas of the MPA.

TARGET #3 – To increase public input by minority populations in the MPA.

➤ **METRIC** – Surveys and/or other public meetings attendance by race and gender.

SURVEY	WHITE	HISPANIC/ LATINO	HAWAIIAN/ PACIFIC ISLANDER	BLACK/ AFRICAN AMERICAN	ASIAN	AMERICAN INDIAN/ ALASKA NATIVE	OTHER
CONNECT NWA-TDP	67%	13%	6%	3%	5%	3%	2%

Gender information was not collected on the Connect NWA-TDP survey. Race nor gender information was collected on the 2045 MTP survey. However, one can surmise from the race statistics above that the majority of people completing the survey were white. This correlates with the race percentages of the population in NWA. Clearly, the MPO has work to do in engaging minority populations.

B. PERFORMANCE MEASURE - MEASURING PUBLIC EXPOSURE TO TRANSPORTATION ISSUES

TARGET #1 – To involve all types of media in spreading the word about transportation issues and to encourage participation in meetings and events.

➤ **METRIC** – Number and Type of Media Exposure

DATE	MEDIA	NUMBER
Fall 2018- March 2021	Legal and Public Notices	86 notices
Fall 2019- January 2021	Newspaper Articles	65+ articles
Fall 2019- January 2021	Facebook	1,797 people
Fall 2018- January 2021	Radio/TV interviews	Approximately 15-20

C. PERFORMANCE MEASURE – MEASURING PUBLIC SENTIMENT TOWARD TRANSPORTATION ISSUES -

TARGET #1 – To identify specific sentiments that are important to area citizens and identify which MTP goals are indicative of these sentiments.

➤ **METRIC** – Number of people answering survey questions that point to fulfillment of goals in the MTP.

MTP Goal I: Increase transportation safety for all modes of travel by providing safe and secure travel for all modes of transportation, including walking, bicycling, transit and vehicular.

2045 MTP Survey –

- 55% rated the roadways in the region as Fair
- 50% rated the safety of roadways in the region as Fair
- 77% said improving road safety was a needed transportation improvement
- 70% said building multi-use trails was a needed transportation improvement

MTP Goal II. Maintain the existing and planned transportation system through ongoing maintenance, rehabilitation, reconstruction, and/or preservation by identifying and protecting corridors needed for future highway, transit, freight, or other transportation system requirements.

2045 MTP Survey –

- 53% said completing a 4 and 5 lane regional grid network was important
- Maintaining existing roads and highways was the third highest category that respondents were willing to spend money on

MTP Goal III: Maximize the capacity and reliability of existing facilities on regionally significant routes and minimize the need for new roadways.

2045 MTP Survey –

- 38% rated their commute reliability as Good, 38% rated it as Fair, and 19% rated it as Poor
- 49% said No to adding lanes to I-49
- 65% said Yes to improving interchanges on I-49
- 52% said Yes to adding overpasses to I-49

MTP Goal IV: Increase transportation mobility and accessibility for both persons and freight, thus promoting economic vitality in the region.

2045 MTP Survey –

- 207 respondents (out of 367) said they would spend money on improving airport and freight facilities
- 78% said Yes to expanding the fixed-route bus system

MTP Goal V: Provide a transportation system that protects and enhances the environment, promotes energy conservation and improves the quality of life.

2045 MTP Survey –

- 51% rated the availability of multi-use trails in the region a Good, with 30% rating it Fair
- 77% rated the availability of transit in the region as Poor, only 4% rated it as Good
- 78% said Yes to expanding the fixed-route bus system
- 81% said Yes to building sidewalks
- 64% rated an increase in gas tax as an Acceptable strategy to improve transportation in the region.
- 82% rated implementing a designated funding source for public transportation as Acceptable



PUBLIC INVOLVEMENT AND THE 2045 MTP PROCESS

NWARPC used a number of techniques to educate and gain public input throughout the MTP process. The following are detailed in this section:

- I. **The Growing Mobility in a Growing Region educational speaker series focusing on how NWA can grow and expand transportation modes.**
- II. **expand transportation modes.**
- III. **The 2045 Metropolitan Transportation Plan Survey.**
- IV. **The 2019 NWA Regional Transportation Survey.**
- V. **The Public Outreach Activities in Connect NWA – 10-year Transit Development Plan, including the Origin/Destination Survey.**
- VI. **The NWARPC 2045 MTP update process.**

I. GROWING MOBILITY IN A GROWING REGION – AN EDUCATIONAL SERIES

NWARPC staff worked with the Ozark Regional Transit Authority (ORT) and Razorback Transit agencies to develop a ten-month, four-part speaker series titled "Growing Mobility in a Growing Region". The educational series consisted of four public events – three speaker lectures and one panel discussion with peer transit agencies. The four-part series featured nationally known speakers with an emphasis on how Northwest Arkansas can grow and expand transportation modes to improve mobility for NWA residents. KUAF radio personality Kyle Kellam's hosted each event and interviewed the speakers as well as NWARPC staff.

- The **first** speaker in the series was Jarrett Walker, author of *Human Transit: How Clearer Thinking about Public Transit Can Enrich Our Communities and Our Lives* and the blog *Human Transit* <http://humantransit.org/>. Mr. Walker spoke on Monday, November 13, 2017 from 6:30 to 8:00 pm at Record event space in Bentonville. The lecture was attended by 67 people.
- Mr. Walker met individually with Razorback Transit and ORT to understand the transit systems prior to his evening lecture.
- Mr. Walker conducted a workshop on Tuesday, November 14, 2017. The workshop focused on a hands-on exercise on transit routes design where the participants had the opportunity to design and plan transit routes in a fictional city based on a series of given conditions and scenarios. The workshop was attended by 43 participants from local government and other local organizations.
- The **second** speaker in the series was Jeff Speck, author of *Walkable City: How Downtown Can Save America, One Step at a Time*. This event took place on January 31, 2018 at the Fayetteville Town Center. Over 180 people attended.
- Mr. Speck met with a smaller group on February 1, 2018 (33 people attended) at Fayetteville City Hall where he gave a short lecture and answered questions.
- The **third** event featured Joe Milazzo, Executive Director Regional Transportation Alliance Raleigh-Durham, and Mark Fisher, Chief Policy Officer, Indy Chamber, Indianapolis. They both spoke with an emphasis toward the business case for transit. The event occurred on Thursday, April 18, 2018, from 4:30 pm to 6:30 pm, at the NWA Board of Realtors in Lowell, and was attended by over 80 people.
- The **fourth** event, titled "Our Next-Door Neighbors' Transit Initiatives" occurred August 8, 2018 at the Jones Center in Springdale, from 4:30 pm – 6:30 pm. Representatives from Kansas City Area Transportation Authority, Mid-America Regional Council (KC, MO), Tulsa Transit, and EMBARK Transit (OK City, OK) joined in a panel discussion of their respective transit stories. 60 people attended the event.

II. THE 2045 METROPOLITAN TRANSPORTATION PLAN SURVEY

As part of the MTP public involvement and input process a 2045 Metropolitan Transportation Plan opinion survey was made available between October 2019 and July 2020 with links to the online version from the NWARPC website, the NWARPC Facebook page, and also by providing the link through emails, media, and newspaper articles. A paper copy of the survey was also available in English and Spanish at public involvement events. A total of 378 surveys were received in English. (A survey summary is available [at this link](#)).

Metropolitan Transportation Plan
2045 NWARPC
**2045 Metropolitan Transportation Plan
 Public Opinion Survey**

The Northwest Arkansas Regional Planning Commission (NWARPC), the Metropolitan Planning Organization (MPO) for Northwest Arkansas and a portion of McDonald County, MO, is currently updating its Metropolitan Transportation Plan (MTP). The 2045 MTP will serve as the 5-year regional transportation plan and provide a long range, comprehensive look at the region's transportation needs and implementation strategies.

Your opinion is very important in the development of the MTP. Since transportation affects everyone in the region, feedback from citizens is needed. Please take a moment to answer the following questions and share your suggestions about transportation. Please mark your answers and return this survey no later than July 31, 2020. You can also complete the survey online at <https://www.surveymonkey.com/r/NWA2045MTP>

1. How would you rate the following?

	Good	Fair	Poor	Neutral/Unsure
Commute time to work (length of time)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reliability of commute (same length of time every day)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic signals and signage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The availability of roadways in the region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The safety of roadways in the region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of transit in the region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of multi-use trails in the region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of sidewalks in the region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Do you think the following transportation improvements need to be made in the region?

	Yes	No	Neutral/Unsure
Adding lanes to I-49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adding interchanges to I-49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improving interchanges to I-49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adding overpasses to I-49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Completing a 4 and 5 lane regional road network	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improving road safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expanding the fixed-route bus system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Building multi-use trails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Building sidewalks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Providing bicycle amenities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning/developing a commuter rail system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing rideshare programs (vehicle/bicycle/scooter)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using technology to improve congestion (changeable highway message signs, signal coordination)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. How would you rate the following strategies to improve transportation in the region?

	Acceptable	Unacceptable	Neutral/Unsure
Increase gas tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase sales tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implement a designated funding source for public transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain the Status quo (no change to current conditions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. You have \$100.00 to spend on transportation in the region. How would you spend it for the following strategies to improve transportation in the region?

\$ _____ Add new lanes to existing roads or highways
 \$ _____ Build new roads
 \$ _____ Maintain existing roads and highways
 \$ _____ Build/improve bicycle and pedestrian facilities
 \$ _____ Expand/improve bus service
 \$ _____ Build/implement passenger rail (light rail, commuter rail, hi-speed rail) service
 \$ _____ Improve airport and freight (truck/train) facilities
 \$ _____ Total (needs to total \$100)

Please tell us about yourself:

Where do you live? _____ How old are you?
 _____ Benton County _____ 10-20
 _____ Washington County _____ 21-45
 _____ McDonald County _____ 46-55
 _____ Other _____ 56-65
 _____ Over 65

Zip code where you live? _____ Approximately how many miles do you live from I-49?
 _____ Under 5
 _____ 5-10
 _____ 11-20
 _____ 21-30

Zip code where you work? _____

Do you use a bicycle or walk to commute to work or for other types of trips? _____ Yes _____ No

Do you use public transportation to commute to work or for other types of trips? _____ Yes _____ No

If your answer is Yes, how often?
 _____ Daily
 _____ 2-3 times a week
 _____ Once a week
 _____ Several times a month
 _____ Other

If your answer is Yes, how often?
 _____ Daily
 _____ 2-3 times a week
 _____ Once a week
 _____ Several times a month
 _____ Other

Do you have regular access to a motor vehicle for work and other types of trips? _____ Yes _____ No

How did you hear about the 2045 MTP public input process?

TV Another website
 Radio Email blast
 Newspaper Social Media
 Flyer on a bus Other
 NWARPC Website

Comments: _____

The following graphics illustrate the number of survey respondents and how they answered survey questions.
Q1: HOW WOULD YOU RATE THE FOLLOWING?

	GOOD	FAIR	POOR	NEUTRAL/UNSURE	TOTAL	WEIGHTED AVERAGE
Commute time to work (length of time)	33.60% 126	41.87% 157	18.13% 68	6.40% 24	375	1.97
Reliability of commute (same length of time every day)	37.60% 141	37.60% 141	19.20% 72	5.60% 21	375	1.93
Traffic signals and signage	33.42% 125	46.26% 173	18.45% 69	1.87% 7	374	1.89
The availability of roadways in the region	34.49% 129	43.05% 161	20.32% 76	2.14% 8	374	1.90
The safety of roadways in the region	23.53% 88	50.27% 188	24.87% 93	1.34% 5	374	2.04
Availability of transit in the region	4.28% 16	10.16% 38	76.74% 287	8.82% 33	374	2.90
Availability of multi-use trails in the region	50.81% 189	29.84% 111	12.37% 46	6.99% 26	372	1.76
Availability of sidewalks in the region	17.43% 65	42.63% 159	34.85% 130	5.09% 19	373	2.28

Q2: DO YOU THINK THE FOLLOWING TRANSPORTATION IMPROVEMENTS NEED TO BE MADE IN THE REGION?

	YES	NO	NEUTRAL/UNSURE	TOTAL	WEIGHTED AVERAGE
Adding lanes to I-49	34.23% 127	49.33% 183	16.44% 61	371	1.59
Adding interchanges to I-49	36.44% 133	41.10% 150	22.47% 82	365	1.53
Improving interchanges to I-49	65.22% 240	19.84% 73	14.95% 55	368	1.23
Adding overpasses to I-49	52.20% 190	24.73% 90	23.08% 84	364	1.32
Completing a 4 and 5 lane regional grid network	53.04% 192	23.76% 86	23.20% 84	362	1.31
Improving road safety	76.96% 284	11.65% 43	11.38% 42	369	1.13
Expanding the fixed-route bus system	78.17% 290	8.89% 33	12.94% 48	371	1.10
Building multi-use trails	69.54% 258	17.25% 64	13.21% 49	371	1.20
Building sidewalks	80.81% 299	10.27% 38	8.92% 33	370	1.11
Providing bicycle amenities	67.57% 250	16.22% 60	16.22% 60	370	1.19
Planning/developing a commuter rail system	67.39% 250	20.22% 75	12.40% 46	371	1.23
Developing rideshare programs (vehicle/bicycle/scooter)	54.18% 201	21.56% 80	24.26% 90	371	1.28
Using technology to improve congestion (Changeable highway message signs, signal coordination, etc.)	84.32% 312	4.86% 18	10.81% 40	370	1.05

Q3: HOW WOULD YOU RATE THE FOLLOWING STRATEGIES TO IMPROVE TRANSPORTATION IN THE REGION?

	ACCEPTABLE	UNACCEPTABLE	NEUTRAL/UNSURE	TOTAL	WEIGHTED AVERAGE
Increase gas tax	64.15% 238	25.34% 94	10.51% 39	371	1.46
Increase sales tax	32.53% 121	50.54% 188	16.94% 63	372	1.64
Implement a designated funding source for public transportation	82.34% 303	4.35% 16	13.32% 49	368	1.31
Maintain the Status quo (no change to current progress)	9.70% 35	75.35% 272	14.96% 54	361	2.05

Q4: YOU HAVE \$100 TO SPEND ON TRANSPORTATION IN THE REGION. HOW MUCH WOULD YOU SPEND FOR EACH OF THE FOLLOWING CATEGORIES?

ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Add new lanes to existing roads or highways	17	4,331	254
Build new roads	19	4,820	258
Maintain existing roads and highways	22	6,629	299
Build/improve bicycle and pedestrian facilities	16	4,275	269
Expand/improve bus service	23	6,901	294
Build/implement passenger rails (light rail, commuter rail, high-speed rail) service	29	8,406	289
Improve airport and freight (truck/train) facilities	6	1,338	207
Total Respondents: 367			

Q5: SHARE ANY OTHER COMMENTS YOU HAVE

181 written comments were received, in English. No surveys were received in Spanish. A complete list of all written comments can be found at:

https://www.nwarpc.org/wp-content/uploads/2020/12/Data_Q5_Comments_201001.pdf

Q6: WHERE DO YOU LIVE?

ANSWER CHOICES	RESPONSES	
Benton County	44.77%	167
Washington County	53.08%	198
McDonald County, MO	0.54%	2
Other (please specify)	1.61%	6
TOTAL		373

Q7: HOW OLD ARE YOU?

ANSWER CHOICES	RESPONSES	
10-20	0.54%	2
21-45	53.62%	200
46-55	15.82%	59
56-65	17.96%	67
Over 65	12.06%	45
TOTAL		373

Q8: ZIP CODE WHERE YOU LIVE?

Q9: ZIP CODE WHERE YOU WORK? MULTIPLE ZIP CODES CAN BE ENTERED.

Information on questions 8 and 9 can be found under:

- A. PERFORMANCE MEASURE – MEASURING PARTICIPATION OPPORTUNITIES AND PARTICIPANTS
 - TARGET #2 – To reach all the zip codes in the MPA.
 - METRIC – Attendance at physical public meetings (through completed surveys) by zip code.

Q10: APPROXIMATELY HOW MANY MILES DO YOU LIVE FROM I-49?

ANSWER CHOICES	RESPONSES	
Under 5	55.56%	205
5-10	30.62%	113
11-20	9.76%	36
21-30	4.07%	15
TOTAL		369

Q11: DO YOU USE A BICYCLE OR WALK TO COMMUTE TO WORK OR FOR OTHER TYPES OF TRIPS?

ANSWER CHOICES	RESPONSES	
Yes	32.44%	121
No	67.56%	252
TOTAL		373

Q12: IF YOUR ANSWER TO THE PREVIOUS QUESTIONS WAS YES, HOW OFTEN?

ANSWER CHOICES	RESPONSES	
Daily	19.15%	27
2-3 times a week	23.40%	33
Once a week	14.18%	20
Several times a month	18.44%	26
Other (please specify)	24.82%	35
TOTAL		141

Q13: DO YOU USE PUBLIC TRANSPORTATION TO COMMUTE TO WORK OR FOR OTHER TYPES OF TRIPS?

ANSWER CHOICES	RESPONSES	
Yes	12.16%	45
No	87.84%	325
TOTAL		370

Q14: IF YOUR ANSWER TO THE PREVIOUS QUESTION WAS YES, HOW OFTEN?

ANSWER CHOICES	RESPONSES	
Daily	10.29%	7
2-3 times a week	13.24%	9
Once a week	11.75%	8
Several times a month	14.71%	10
Other (please specify)	50.00%	34
TOTAL		68

Q15: DO YOU HAVE REGULAR ACCESS TO A MOTOR VEHICLE FOR WORK AND OTHER TYPES OF TRIPS?

ANSWER CHOICES	RESPONSES	
Yes	97.30%	361
No	2.70%	10
TOTAL		371

Q16: HOW DID YOU HEAR ABOUT THIS NWARPC 2045 MTP PUBLIC INPUT SURVEY OR EVENT?

ANSWER CHOICES	RESPONSES	
TV	0.81%	3
Radio	0.27%	1
Newspaper	2.96%	11
NWARPC Website	3.77%	14
Another website	3.50%	13
Email	28.03%	104
Social Media	46.36%	172
Other (please specify)	14.29%	53
TOTAL		371

QUESTION 5 COMMENTS – CONVEYING SENTIMENT (the larger the size, the more often a word was used):

much know money WAY public free options solution highway begin car fixed bus routes
 Also expanding real schools Please see poor help I-49 vehicle routes TRIP
 transit system mile build Keeping system consider public transportation
 especially NWA service many ride stop faster lanes city also park
 buses think area come people go need train
 roads rail system transportation sidewalks traffic community
 bike now Fayetteville will improve I49 expanding turning
 transit Making work maintain live first planning improvement use regional time
 Fayetteville Bentonville public transit us provide future town passenger rail commute running
 congestion north-south family commute times trails connect travel put bike trails west
 bike lanes Major share

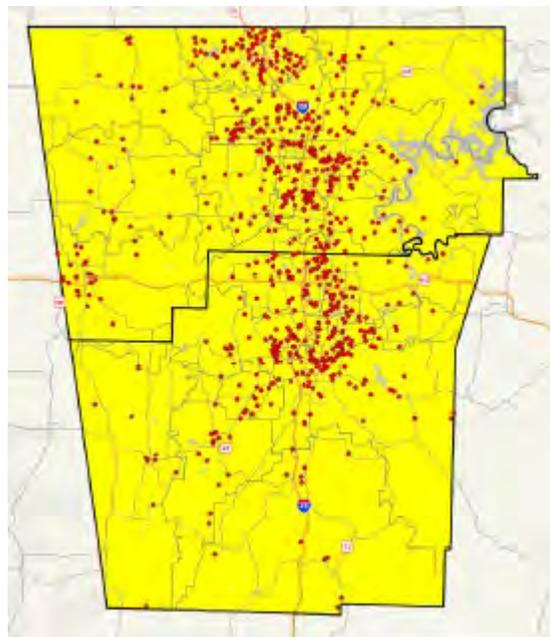
III. 2019 NWA REGIONAL TRANSPORTATION SURVEY

During September 2019, ETC Institute administered a regional transportation survey for the NWARPC. The purpose of the survey was to gather input from residents to better understand the level of satisfaction with the region's transportation system and attitudes toward prioritizing transportation improvements.

A five-page survey was mailed to a random sample of households in the MPA. Residents were given the option of returning the survey by mail or completing it online. Emails and phone calls were made to encourage households to participate. The *2019 NWA REGIONAL TRANSPORTATION SURVEY – FINAL FINDINGS REPORT* can be found [at this link](#).

The final results of the survey were presented to the RPC/Policy Committee on December 6, 2019 (TV interview after meeting):

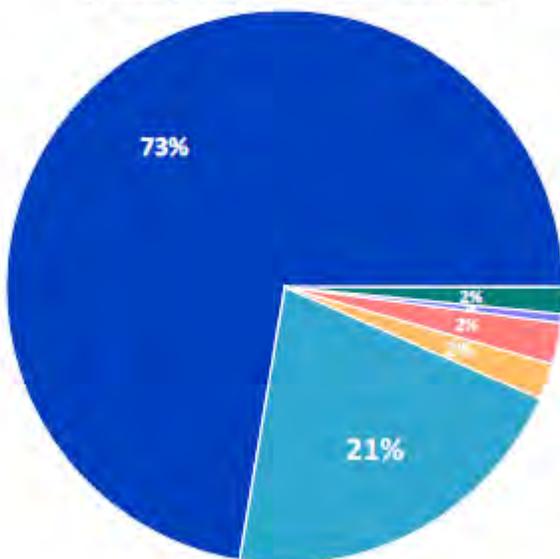
- The purpose of the survey was to gather input from residents to better understand the level of satisfaction with the region's transportation system and attitudes toward prioritizing transportation improvements.
- The survey was conducted during September 2019 and was a scientifically based random sample survey of 835 households with a confidence level of 95%.
- Mail vs Email – 835 total surveys (370 by mail and 465 by email/online).
- 365 surveys completed in Washington County.
- 469 completed in Benton County.
- To better understand how well the regional transportation system functions in different parts of the MPA, the home address of each respondent to the survey was geocoded. The map below shows the location of the respondents:



- Key Overall Findings in the Report:
 - Residents were MOST satisfied with
 - Availability of off-street paths/trails (60%)
 - Flow of traffic on streets during nonpeak times (53%)
 - Residents were LEAST satisfied with
 - Flow of traffic on streets during peak times (77%)
 - Availability of public transit options (73%)
 - Ease of travel using public transit (70%)

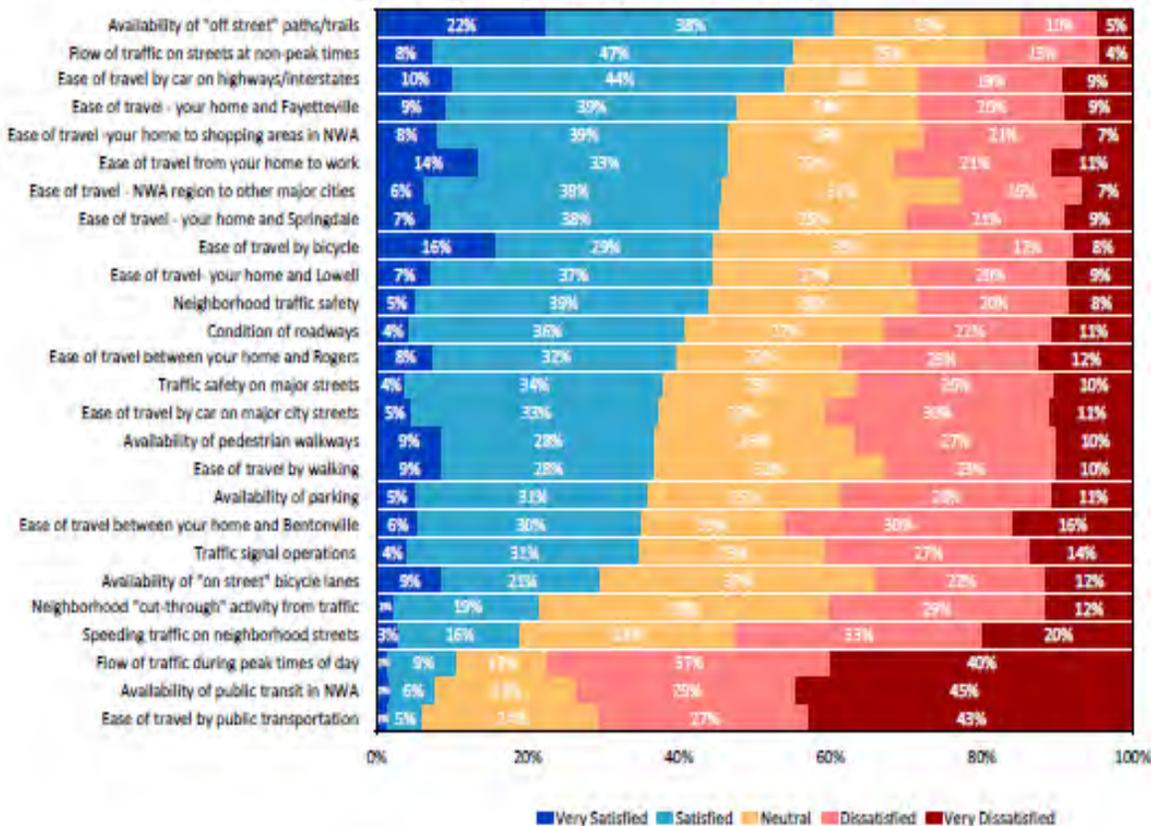
Q1. Compared to five years ago, would you say that traffic congestion in the Northwest Arkansas (NWA) region area has...

by percentage of respondents (without "don't know")



Q2. How satisfied are you with following aspects of transportation in the Northwest Arkansas region?

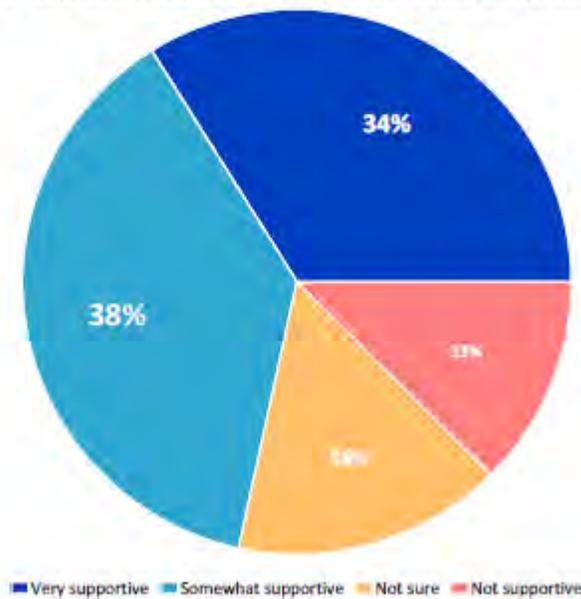
by percentage of respondents (without "don't know")



- Based on survey responses, in order to raise the overall satisfaction ratings regarding NWA transportation, the survey analysis recommends as **top priorities** attending to the following issues:
 - Relieve traffic congestion
 - Traffic flow on streets during peak times
 - Affordability of air flights in the region
 - Availability of public transit in NWA
 - Number of destinations served by public transportation
 - Maintain existing roads and highways
 - Provide travel choices other than automobiles
- Funding
 - High levels of importance placed on funding transit
 - Support for increasing the level of funding for public transportation
 - Support for increasing level of funding for road and highway improvements

Q22a. How supportive would you be of paying an increase in taxes to support expanded public transportation services in Benton and Washington Counties?

by percentage of respondents who think there is a needed to expand public transportation services



IV. PUBLIC OUTREACH ACTIVITIES: IN THE CONNECT NWA – 10-YEAR TRANSIT DEVELOPMENT PLAN, INCLUDING THE ORIGIN/DESTINATION SURVEY

Connect Northwest Arkansas (NWA) is a 10-Year Transit Development Plan (TDP) that will serve as a “Blueprint” for improving and expanding transit in the NWA region. Connect NWA establishes a shared understanding of what successful transit looks like, how to design effective service and ultimately how to implement it regional and locally. The complete Connect NWA-TDP can be viewed [at this link](#).

Chapter 1: Public Engagement, is an in-depth explanation and analysis of the extensive public engagement process used in development of the TDP. Briefly, online engagement, a public survey (in English, Spanish and Marshallese) and in-person meetings were the core elements used to gain insight into the transportation needs and desires within the NWA community. The engagement process involved two main phases. The first phase consisted of nine public engagement events along with a public survey. TV media attended several of these events. The second phase involved public engagement events (TV media attended), along with a survey, that gathered input on the scenarios and recommendations that were produced using the results of the first phase of public engagement, coupled with a technical analysis. The public comments made at the second public engagement events were incorporated into the

final TDP in the form of changes in some of the recommended routes (this phase of engagement is discussed in further detail in Chapter 4). Dates, event locations, survey results, stakeholder involvement, educational tools used, and other information is shown and summarized in Chapter 1.

TABLE 1.2: PAPER SURVEYS RECEIVED FROM FIRST PHASE EVENTS

EVENT	SURVEYS RECEIVED	% OF TOTAL EVENT SURVEYS
University of Arkansas Baseball Game	52	7%
Northwest Arkansas Community College	75	9%
Springdale Walmart	40	5%
Promenade Shopping Center	13	2%
University of Arkansas	177	22%
First Friday Bentonville	130	16%
Hogeye Marathon & Expo	30	4%
Fayetteville Farmers Market	43	5%
Marshallese Festival	82	10%
Cinco De Mayo	83	10%
*Other	83	10%
Total Surveys from Events	808	100%

*Other surveys reflect those that were conducted while riding buses or surveys that were used without an event code.

Public Survey Results for NWARPC 10-Year TDP



A Steering Committee was established to help guide the TDP update process, assist NWARPC staff and the consultants, and to report updates and other information to their respective cities and organizations. The Committee consists of:

- four city staff members
- a staff member from ORT and a staff member from Razorback Transit
- one member representing human service agencies
- one member representing a philanthropic foundation
- one member representing the engineering community
- one member representing the housing/real estate industry
- A NWARPC staff member

The Steering Committee met in person three times throughout the process. Numerous memos were sent to members keeping them updated on the progress of the plan. The coronavirus pandemic health emergency in early spring 2020 halted all in-person meetings.

In August 2020, NWARPC and ATG consultants decided that due to the continuing health emergency, the final presentations of the draft *Connect NWA-TDP* would proceed virtually, with the consultants giving the presentation from their home base in Austin, Texas. The schedule of these virtual presentations was:

- Springdale – 5:30 pm, Monday, August 17, 2020
- Rogers – 4:40 pm, August 25, 2020
- Bentonville – 6:00 pm, Tuesday, September 8, 2020
- Fayetteville – 4:30 pm, Friday, September 25, 2020

Virtual presentations were also made at the October 22, 2020 ORT Board Meeting, where the plan was adopted unanimously by the Board; the TAC October 15, 2020 meeting; and the RPC/Policy Committee October 28, 2020 meeting where the plan was adopted unanimously (Resolution #2020-06).

ORIGIN/DESTINATION TRANSIT SURVEY

The O/D Survey was Phase I of the TDP update. ETC Consultants performed the work. For the complete O/D Survey Report [see this link](#).

The Northwest Arkansas Regional Planning Commission (NWARPC) System Wide Origin and Destination Survey was conducted in March 2018. The survey was completed for regional transit riders in the Northwest Arkansas area on both Ozark Regional Transit (ORT) and Razorback Transit (Razorback) systems. The Survey served several objectives, including:

- The compilation of statistically accurate information about transit customers' use of transit services for planning purposes.
- Enhancing the NWARPC four-step travel demand forecasting model.
- Providing the understanding of differences in trip characteristics and ridership profiles from previous survey efforts.
- Assisting regional transit agencies in meeting Title VI Civil Rights Requirements and enhance Title VI programs.

Full Survey Summary and Key Findings

ETC conducted the Survey collection between March 5 and March 14, 2018. The magnitude of the Survey will allow NWARPC planners to better understand the needs and travel patterns of many specialized populations.

- The surveyors boarded ORT and Razorback Transit buses between March 5 – March 15, 2018 on weekdays only and completed the survey successfully. Over this time period the ETC staff conducted the collection with randomly selected boarding riders and asked them to participate in the survey. ETC staff was able to begin the interview process with 1,158 riders, only 37 riders were not able to complete the interview. The 1,121 records collected were then reviewed by ETC staff at the home office to determine if the one-way trip information provided was plausible using: origin address, destination address, boarding and alighting locations, and transfer routes used either prior to or after the current route. Of the 1,121 records collected, only 41 of these records were purged due to illogical data, which left sample size of 1,080.

SOME IMPORTANT FINDINGS FROM THE ANALYSIS OF THE REGIONS' RIDERS ARE THE FOLLOWING (USING LINKED WEIGHT FACTOR):

- ❖ Walking is the dominant access (83%) and egress (88%) mode for all riders.
- ❖ Ninety-two percent (92%) of riders use only one route to complete their one-way trip.
- ❖ Seventy-nine percent (79%) of all riders are between the age of 19 to 34.
- ❖ Twenty-four percent (24%) of riders reported not having a household vehicle with the majority (71%) of zero household vehicles coming from the ORT system.
- ❖ More than half (56%) of riders reported being employed (full & part-time).
- ❖ Eighty percent (80%) of riders possess a valid driver's license.

Sampling Plan Summary

To ensure that the distribution of completed surveys mirrored the actual distribution of riders, ETC developed a sampling plan to collect passenger origin and destination survey data with approximately 1,000 of the system’s riders during the weekdays based on February 6 and 8, 2018 ridership. The Table below shows the overall Sampling Plan Rates, Goals, Records Completed, and Percentage of Goal Obtained.

SYSTEM	SAMPLING RATE	GOAL	COMPLETED	% COLLECTED
Ozark Regional Transit	8% of Daily Ridership	103	132	128%
Razorback Transit	8% of Daily Ridership	887	976	110%
Totals	8% of Daily Ridership	990	1,108	112%

Survey Weighting and Expansion Summary

Weighting and expansion are used to make the sample collected representative of the population ridership. Based on the low ridership volumes for ORT routes and the route/trip type of Razorback, the expansion was simply expanding the surveys at the route and time of day level.

Data Quality Assurance and Processing Summary

Overall quality assurance/quality control (QA/QC) process was implemented throughout the actual Survey administration and after its completion with proven post-processing quality check techniques. The establishment of specific sampling goals and procedures for managing the goals ensured that a representative sample was obtained from each route. Also, the use of the latest geocoding/survey review tools used by ETC’s Transit Review Team contributed to the high-quality results that were achieved.

Areas of improvement for future on-board surveys

Leading into the data collection discussions were held as to how to best capture the high percentage of known short trips occurring on Razorback. It was determined that bringing in experienced interviewers to collect the data, rather than local staff. Using this plan, the collection occurred without any meaningful issues. No changes were identified during the project; and, therefore, no improvements are necessary based on current technology and methodology.

V. NWARPC 2045 MTP UPDATE

The NWARPC 2045 Metropolitan Transportation Plan (MTP), in order to meet federal guidelines, is required to be updated every five years. The following is a summary of update process.

- July 2019, staff began discussions concerning the MTP outline.
- July 2019, staff began discussions concerning the MTP Vision and Goals.
- August 2019, staff continued discussion of the Vision and Goals.
- August 2019, staff continued working on the MTP outline and began updates to the 2045 MTP materials for the public input meeting.
- Prepare and continue to develop MTP public participation. (On-going throughout the MTP development process.)
 - In July 2019, staff began discussions with ATG, the consultant responsible for the TDP update, on conducting a joint public input event in fall 2019. This event translated into the Public Forum to kick off the 2045 MTP process.
 - In August 2019, staff continued working on the MTP outline and began updates to the 2045 MTP materials for the public input meeting. Staff finalized the MTP public open house events:
 - Wednesday, October 16, 2019 at the Rogers Public Library, 4:00 pm – 7:00 pm
 - Thursday, October 17 at the Fayetteville Town Center, 4:00 pm – 7:00 pm
 - In September 2019, staff finalized some of the materials that would be used at the 2045 MTP public open houses. Display materials include posters and maps and an updated opinion survey that will be available in paper and online.

- In October 2019, staff from NWARPC, Ozark Regional Transit, Razorback Transit and ATG Consultants presented information, posters, and handouts about the 2045 MTP update process and the recommendations for transit routes as part of the Connect NWA future local transit system. Paper 2045 MTP opinion surveys were available for participants to complete at the open house. Tablets were provided so participants could take the survey online. Additionally, they could take the survey on their smart phone. Paper surveys with three questions were also available for opinions on the individual transit routes presented as part of Connect NWA. A summary is available [at this link](#).
- ❖ Public Participation
 - Over 100 people participated in the Open House events.
 - The NWARPC follows the requirements as set forth in the NWARPC Public Participation Plan (PPP), a document that has been approved by the RPC/Policy Committee, ARDOT, and FHWA and FTA
 - Legal Notices were published in the NWA Democrat Gazette, La Prensa Libre (Spanish), McDonald County Press
 - Display Ads were published in the Sunday, October 13, 2019 edition of the NWA Democrat Gazette, and the Thursday, October 10, 2019 edition La Prensa Libre (Spanish)
 - Email Blast – 3 to 4 reminders
 - Newspaper articles (NWDG) detailed both plans and the open houses
 - TV news interviews (2)
 - Notice was posted on NWARPC website and other websites (transit agencies, cities, public libraries)
 - Social Media – information was pushed out on Face Book
 - Flyers in English and Spanish were posted on transit buses for the week prior to the open house events
 - Letters were sent to area human service agencies and Spanish-speaking churches
 - Word of mouth – announcements made in all NWARPC meetings for the month prior to events
- The following POLICIES were presented to the TAC and RPC/Policy Committees at their virtual May 2020 meetings:
 - Access Management – Currently have a tri-party agreement between Fayetteville, ARDOT, and NWARPC for the first section of Hwy 112 in Fayetteville. On January 23, 2019, the RPC/Policy Committee adopted Resolution #2019-02, to Adopt the Hwy 112 Access Management Plan Regional Vision and to Support and Advocate the Adoption of Access Management Plan Agreements for Hwy 112 in Benton and Washington Counties.
 - Complete Streets Policy.
 - Connectivity of major corridors.
 - Congestion Management Process (required by FAST Act).
 - Coordination with ARDOT and Metroplan (Little Rock) on congestion performance measures in large urban areas (Transportation Management Areas over 200K population). In May 2020, NWARPC agreed to coordinate with ARDOT and Metroplan – this will involve an update to the NWARPC 2015 CMP Report, using third party data.
 - Performance Measures and Targets (required by FAST Act).
 - Updated TSMO/ITS plans, in partnership with ARDOT (required by FAST Act).
 - Minute Order 2020 041 authorized ARDOT to enter into any necessary agreements with NWARPC to partner on a regional TSMO plan and ITS architecture update for Northwest Arkansas, utilizing the same consulting firm that will develop the statewide TSMP plan.
 - Housing Study – Incorporate Policy Recommendations.
 - Consider the relationship between housing and transportation cost.
 - Consider a regional compact.
- The proposed Vision, Goals, and System Performance Measures were presented to the TAC and RPC/Policy Committee at their virtual June 2020 meetings.
- The Constrained and Unconstrained Project lists were presented virtually to the public and the TAC on November 19, 2020 and to the RPC/Policy Committee on December 2, 2020.
- The NARTS FFY 2021-2024 Transportation Improvement Program (TIP) was approved by the RPC/Policy Committee on December 2, 2020.
- Staff met with McDonald County Commissioners and MoDOT officials (virtually) in Pineville, MO to discuss and take comment on MoDOT projects included in the MTP.

- The draft MTP Chapters were presented to the TAC and public virtually on December 17, 2020.
- Adoption Timeline:
 - January 21, 2021 – TAC virtual meeting – Review Draft MTP and recommend to RPC/Policy Committee.
 - January 27, 2021 – RPC/Policy Committee virtual meeting – Virtual Public Hearing/Open House to review draft MTP and accept public comments.
 - January 28 through February 28, 2021 – Virtual Public Comment Period.
 - March 18, 2021 – TAC virtual meeting – Review draft MTP, hear any significant public comments.
 - March 24, 2021 – RPC/Policy Committee virtual meeting – Review draft MTP, hear any significant public comments, approve NWARPC 2045 MTP.



PUBLIC INVOLVEMENT AND ENGAGEMENT

A number of public relations tools were used to communicate with the public, provide information on the progress of the MTP, and generate public input into the MTP in an effort to develop consensus and direction. The following tools focus on notifications and communications:

- Legal Notification
- Newspaper articles, photos, and TV/radio interviews
- Website – Interactive online map, survey, and email comments
- Social media/Facebook
- Email broadcasting
- Community events, activities, and meetings
- Interactive public input forums
- Flyers on transit buses
- Interagency consultation process

In addition to reaching out to the public at-large, the existing professional knowledge base was maximized by taking advantage of local staff and elected officials throughout the development process.

MTP updates were provided to the TAC and the RPC/Policy Committee throughout the process, and member comments were integrated into the document.

LEGAL NOTIFICATION – Legal notification, per the PPP, was provided to the Northwest Arkansas Democrat Gazette (NWADG), the La Prensa Libra and McDonald County Press newspapers. The following table reflects the dates of all published legal notifications (beginning in fall 2018).

LEGAL AND PUBLIC NOTICES

[DG=DEMOCRATE GAZETTE; LAP=LA PRENSA; MCD=McDONALD COUNTY PRESS]

DATE	DG	LAP	MCD	DATE	DG	LAP	MCD	DATE	DG	LAP	MCD
9.13.18	X	X		10.9.19	X			7.19.20	X		
10.11.18	X	X		10.10.19		X	X	7.23.20		X	
11.28.18	X			10.13.19	X			8.27.20		X	X
12.20.18	X	X		11.27.19	X			9.6.20	X		
1.5.19	X			12.19.19	X	X		9.13.20	X		
1.10.19		X		1.2.20	X	X	X	9.17.20		X	X
1.28.19	X			3.1.20	X			10.4.20	X		
2.7.19	X	X	X	3.12.20	X	X	X	10.8.20		X	X
2.20.19	X			3.29.20	X			10.11.20	X		
3.7.19	X			4.2.20		X	X	10.15.20		X	X
3.14.19		X	X	4.12.20	X			11.1.20	X		
3.21.19	X	X		4.16.20		X	X	12.6.20	X		
4.11.19		X	X	4.19.20	X						
4.28.19	X			4.23.20		X	X				
5.9.19	X	X		5.10.20	X			1.10.21	X		
6.13.19		X	X	5.14.20		X	X	1.14.21		X	X
6.20.19	X			7.2.20		X		1.17.21	X		
7.11.19	X	X	X	7.5.20	X			3.7.21	X		
8.14.19	X			7.7.20	X			3.11.21		X	X
10.3.19	X	X		7.11.20		X		3.14.21	X		

PUBLIC OPEN HOUSES

The public forums/open houses were advertised in a variety of ways. The NWARPC website and calendar listed each forum. Other agencies, including ORT and Razorback Transit, hosted information on the open houses. The NWARPC Facebook page posted information and links to additional information. A press release was sent out ahead of each meeting to both the English and Spanish speaking newspapers, along with email notifications to State press; State and local governmental agencies; State legislators and U.S. Senators; and current and previous public input participants. Flyers were posted in Spanish and English on local buses. Display ads in the Democrat Gazette and the La Prensa Libra were also used to announce public open houses for the MTP and the TDP.

FIGURE 1.2: FIRST PHASE ENGAGEMENT EVENTS

02 Tuesday April	U of A Razorbacks vs. Little Rock Trojans 1235 S Razorback Rd, Fayetteville, AR Baum-Walker Stadium 5:30pm	
03 Wednesday April	NWACC 1 College Dr, Bentonville, AR Burns Hall 8am - 2pm	Walmart 2004 S Pleasant St, Springdale, AR 3pm - 6pm
04 Thursday April	Promenade Shopping Center 2203 Promenade Blvd. Rogers, AR Near KAY Jewelers 3pm - 6pm	U of A Campus Garland Ave, Fayetteville, AR Union Station 1pm - 5pm
05 Friday April	First Friday Bentonville 100 N Main St, Bentonville, AR Bentonville Square 11am - 8pm	Hogeye Expo 922 E. Emma Ave. Springdale, AR Jones Center 12pm - 7pm
06 Saturday April	Fayetteville Farmers Market 101 W Mountain St, Fayetteville, AR Fayetteville Square 7:30am - 1pm	Hogeye Marathon 106 W. Emma St, Springdale, AR Shiloh Square 7am - 2pm



¡Estás invitado!



¡Ven a nuestro Public Open House

Connect Northwest Arkansas: Por favor, venga a aprender acerca de las recomendaciones propuestas por Connect NWA. Connect NWA ha desarrollado nuevas alineaciones de rutas y oportunidades para mejoras en la prestación de servicios que mejorarán la conectividad, ahorrarán tiempo a las personas y proporcionarán una base para el tránsito en los años venideros. Venga a ver los beneficios que cada comunidad local y la región en su conjunto podrían lograr a través de Connect NWA.

The 2045 MTP: Actualización al actual MTP de la NWA 2040 como plan de transporte regional de 5 años. El plan proporciona un largo alcance, integral examinar las necesidades de transporte de la región y las estrategias de carreteras, tránsito e instalaciones para bicicletas y peatones. La casa abierta destacará las recomendaciones del plan actual, la red arterial, la red de tránsito, el Programa de Mejoramiento del Transporte FFY 2019-2022, y la red regional de bicicletas y peatones, así como otras pantallas.



Miércoles, Oct 16

Rogers Public Library
711 S Dixieland Rd, Rogers
-OR-

Jueves, Oct. 17

Fayetteville Town Center
15 West Mountain St, Fayetteville

- 4pm hasta 7pm -

Para obtener más información, llame (479) 751-7125 o correo electrónico cscott-silkwood@nwarpc.org or visit: <http://nwarpc.org/transportation/metropolitan-transportation-plan/>



AVISO DE NO DISCRIMINACIÓN: La Comisión de Planificación Regional del Noroeste de Arkansas cumple con todas las disposiciones de derechos civiles de las estatutas federales y autoridades relacionadas que prohíben la discriminación en los programas y actividades que reciben asistencia federal, incluyendo la Ley de Estadounidenses con Discapacidades, la Sección 504 de la Ley de Rehabilitación y el Título VI de la Ley de Derechos Civiles de 1964. Las quejas de supuesta discriminación y consultas sobre las políticas de no discriminación de la NWARPC pueden dirigirse a Calla Scott-Silkwood, AICP, Regional Planner – EEO/DBE/ADA/504/Title VI Coordinator, 1311 Clayton, Springdale, AR 72762, (479) 751-7125 (Voz/TTY 7-1-1 o 1-800-285-1131); Para llamadas en español, marquesinas al 866-656-1842; para llamadas en inglés, marque el 711 o directamente al 800-285-1131, o la siguiente dirección de correo electrónico: cscott-silkwood@nwarpc.org

You're Invited!
to our
Public Open House

Connect Northwest Arkansas: Please come learn about Connect NWA's proposed recommendations. Connect NWA has developed new route alignments and opportunities for service delivery enhancements that will improve connectivity, save people time and provide a foundation for transit for years to come. Come see the benefits that each local community and the region as a whole could achieve through Connect NWA.

The 2045 MTP: Update to the current 2040 NWA MTP as the 5-year regional transportation plan. The plan provides a long range, comprehensive look at the region's transportation needs and implementation strategies for highways, transit, and bicycle and pedestrian facilities. The open house will highlight the current plan's recommendations, the arterial network, transit network, the FFY 2019-2022 Transportation Improvement Program, and the regional bicycle and pedestrian network, as well as other displays.



Wednesday, Oct 16

Rogers Public Library
711 S Dixieland Rd, Rogers
-OR-

Thursday, Oct. 17

Fayetteville Town Center
15 West Mountain St, Fayetteville

- 4pm to 7pm -

For more information call (479) 751-7125
or email cscott-silkwood@nwarpc.org
or visit:

<http://nwarpc.org/transportation/metropolitan-transportation-plan/>



NOTICE OF NONDISCRIMINATION: The Northwest Arkansas Regional Planning Commission complies with all civil rights provisions of federal statute and related authorities that prohibit discrimination in programs and activities receiving federal assistance, including the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and Title VI of the Civil Rights Act of 1964. Complaints of alleged discrimination and inquiries regarding the NWARPC's nondiscrimination policies may be directed to Cate Scott-Silkwood, RACP Regional Planner – EQUIS/BJA/ADA/504/Title VI Coordinator, 1311 Claytons, Springdale, AR 72762, (479) 751-2125, (Voice/TTY) 7-1-1 or 1-800-285-1131; Para llemadas en español, marque el 866-656-1642; párr llamadas en inglés, marque el 711 o directamente al 800-285-1131, or the following email address: cscott-silkwood@nwarpc.org.

NEWSPAPER ARTICLES AND FACEBOOK

The public involvement effort was greatly aided by the numerous articles and photos in the NWADG pertaining to many of the activities that NWARPC was involved in through the MTP and TDP development process. For example, many articles or photos concerned highway/roadway projects; trails; bicycle and pedestrian plans; transit; population, and housing. Over 65 articles/photos were printed over the course of the MTP public involvement period. Other methods of informing the public included TV and radio interviews, as well as presentations to UA students, philanthropic organizations, local government officials, and citizens. Social media (Facebook) reached a total of 1,797 people – 60.4% women, 39.6% men; majority of people 65+ in age (June 2020 FB boost – reached 1,298 people/39 clicks; July 2020 FB boost reached 499 people/7 clicks).

SAMPLE NEWSPAPER ARTICLES

DATE	NEWSPAPER ARTICLES (DEMOCRAT GAZETTE)
1.5.19	Highway 265 opens with improvements
1.5.19	Highway funding top priority
1.10.19	Safe Streets
1.18.19	Highway 112 access management plan
1.20.19	TDP study kicks off
3.31.19	Public asked to help form transit plan – 9 public input events scheduled
6.21.19	Regional planners look to divvy up money for transportation
7.26.19	NWA validates need for robust transit system
9.10.19	Region to receive money for trails
10.13.19	MTP kick off public open houses – Transportation plans focus of sessions
10.17.19	Planners hear suggestions from residents – Committee starting work on 2045 MTP
3.6.20	Area growth topic of meeting
3.13.20	Planners consider how to fit one million residents into NWA – Housing in area cities
5.28.20	NWARPC to take meetings, public input online
6.14.20	Planners look at transportation needs in 2045 MTP update
6.25.20	Transportation plan for 2045 will look at the big picture
10.22.20	ORT Board approves Connect NWA-TDP
12.3.20	Highway 112 tops list in TIP and MTP
12.16.20	Residents get say on Hwy 112 plans

DATE	OTHER EDUCATIONAL/INPUT OPPORTUNITIES
2.12.18	Staff was a guest lecturer on regional transportation issues at UA (85 attendees)
2.22.18	Kick Off meeting for the Origin/Destination Survey
3.27.18	Staff participated in the ARDOT Hwy 102/62 Corridor Study public involvement meeting
3.28.18	Staff participated in the ARDOT Hwy 412 Corridor Study Public Officials and Technical Group meeting
7.5.18	FFY 2019-2022 TIP public forum
7.18.18	NWARPC submitted, and received, a BUILD grant for the I-49 Connector
7.25.18	RPC/Policy Committee receives preliminary Hwy 72 Corridor Study report from ARDOT
Nov 2018	NWARPC hosts NACTO training/5 Es training for local city staff, engineers and consulting firms (80 attendees)
2.22.19	Kick Off meeting for the Transit Development Plan
2.12.19	Staff participated in the ARDOT Hwy 102/62 proposed improvement plan for Public Officials and Public Input meeting
Spring 2019	Local mayors visit Austin, TX, where they tour and ride the transit system see firsthand how a successful transit system operates
5.15.19	RPC/Policy Committee receives final Hwy 72 Corridor Study report from ARDOT
7.25.19	Meeting with TDP Steering Cmte, ORT Board, and consultant concerning the final report of the O/D Survey (35 attendees)
10.17.19	Staff radio and television interview concerning the MTP and TDP public forums; Flyers in Spanish and English posted on buses
Oct 2019	Staff accompanies local elected officials on a bicycle tour of the Netherlands to learn about safe bicycling for transportation (15 attendees)
3.12.20	Staff was a guest lecturer on the MTP and TDP updates processes (75 attendees)
4.15.20	Staff was interviewed about the TDP and MTP by KNWA, a local TV station reaching all of NWA Arkansas
6.22.20	Staff participated in the ARDOT W. N/S Connector Public Open House
8.28.20	Newspaper article concerning TDP, including a link to TDP on NWARPC web site
August 2020	Staff and consultants gave a presentation to the Springdale and Rogers City Council concerning the final draft TDP
Sept 2020	Staff and consultants gave a presentation to the Bentonville and Fayetteville City Council concerning the final draft TDP
10.22.20	Staff and consultants gave a presentation to the ORT Board of Directors concerning the draft TDP
10.28.20	Virtual Public Forum concerning the draft FFY 2021-2024 TIP (25 attendees)
12.14.20	Staff attended a public official(s) meeting held virtually by ARDOT concerning Hwy 112 design
12.17.20	TAC virtual meeting, open to public, to review draft MTP chapters



**Metropolitan Transportation Plan
2045 NWARPC**

**PUBLIC NOTICE OF:
INTENT TO HOLD A VIRTUAL TECHNICAL ADVISORY COMMITTEE MEETING; HOLD A
FINAL VIRTUAL PUBLIC OPEN HOUSE CONCERNING THE NWARPC 2045
METROPOLITAN TRANSPORTATION PLAN DURING A VIRTUAL NWARPC/POLICY
COMMITTEE MEETING; INVITE PUBLIC COMMENT FOR A 30 DAY PERIOD.**

The Northwest Arkansas Regional Planning Commission (NWARPC) is giving Notice of Intent to conclude the process of updating the NWA regional Metropolitan Transportation Plan (MTP), titled NWARPC 2045 MTP. The Draft MTP will be available for public inspection on Thursday, January 21, 2021 online at <https://www.nwarpc.org/2045-metropolitan-transportation-plan/>. **VIRTUAL TAC MEETING:** The NWARPC Technical Advisory Committee (TAC) will hold a virtual meeting on Thursday, January 21, 2021 at 10:30 AM. The purpose of the meeting will be to review and discuss the Draft MTP, among other items. **VIRTUAL PUBLIC OPEN HOUSE:** NWARPC is inviting the public to view and comment on the Draft MTP by attending a virtual Open House to be held during the NWARPC/Policy Committee virtual meeting on Wednesday, January 27, 2021 beginning at 1:30 pm. **HOW TO ATTEND THE OPEN HOUSE OR MEETING:** Information on how to attend the virtual Open House and TAC and NWARPC/Policy Committee meetings will be available on the NWARPC web site, <https://www.nwarpc.org/> or email cscott-silkwood@nwarpc.org. Members of the public are encouraged to join the Open House and voice comments. **PUBLIC COMMENT:** Even though the NWARPC office is closed for in-person meetings and events, NWARPC remains committed to providing opportunities for public comment. The public may offer comments on the Draft MTP during the 30-day public comment period running from January 28, 2021 through February 28, 2021. The public is encouraged to visit the NWARPC web site, <https://www.nwarpc.org/2045-metropolitan-transportation-plan/> to view the document and written comments can be sent to <https://www.nwarpc.org/contact/>. Comments can also be written and mailed to 1311 Clayton, Springdale, AR 72762. **SERVE ON A COMMITTEE:** NWARPC invites members of the public to participate in non-elected committees. Please call 479-751-7125 for more information on committees and how to participate.

NWARPC DISCLAIMER: This notice is in accordance with the 2040 Northwest Arkansas MTP, the Federal Transportation Act (FAST Act) in cooperation with local agencies, ARDOT, MoDOT, FHWA, and FTA. Documents are funded in part through grant(s) from the FHWA, FTA, and/or the U.S. Department of Transportation. The views and opinions of the NWARPC expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation. **TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PUBLIC PARTICIPATION PROCESS FOR PROGRAM OF PROJECTS (POP):** The public participation procedures outlined in the NWARPC Public Participation Plan (PPP) with respect to TIP development serve as the public participation process required for the development of transit projects as per FTA Circular 9030.1E. **NWARPC NOTICE OF NONDISCRIMINATION POLICY:** The NWARPC complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore, the NWARPC does not discriminate on the basis of race, sex, color, age, national origin, religion or disability, in the admission, access to and treatment in NWARPC's programs and activities, as well as the NWARPC's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the NWARPC's nondiscrimination policies may be directed to Celia Scott-Silkwood, MCP, Regional Planner – EEO/DBE (ADA/504/Title VI Coordinator), 1311 Clayton, Springdale, AR 72762, (479) 751-7125, Voice/TTY 7-1-1 or 1-800-285-1131; Para llamadas en español, marque el 800-800-1842; para llamadas en inglés, marque el 711 o directamente al 800-285-1131) or the following email address: cscott-silkwood@nwarpc.org. This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille. If information is needed in another language, contact Celia Scott-Silkwood. Si necesita información en otro idioma, comuníquese Celia Scott-Silkwood, 479-751-7125, cuando menos 48 horas antes de la junta. Language assistance is available free of charge to all persons. Aviso de Disponible idioma servicio a las personas LEP: Ayuda con el idioma esta disponible de forma gratuita a todas las personas.

INTERAGENCY CONSULTATION PROCESS

The NWARPC 2020 Public Participation Plan includes policies and activities to further enhance public participation in the transportation planning process. Several of these policies and activities have been discussed. The table below discussed the Interagency Consultation Process, in relation to development of the NWARPC 2045 MTP.

<p>4) INTERAGENCY CONSULTATION PROCESS</p> <p>IN THE DEVELOPMENT OF THE MTP AND TIP, THE NWARPC WILL (TO THE MAXIMUM EXTENT PRACTICABLE) CONSULT WITH AGENCIES AND OFFICIALS RESPONSIBLE FOR OTHER PLANNING ACTIVITIES WITHIN THE MPA, OR COORDINATE ITS PLANNING PROCESS WITH SUCH PLANNING ACTIVITIES. THE GENERAL PROCESS FOR THIS CONSULT IS OUTLINED AS FOLLOWS:</p>
<p>a) Notify federal, state and local agencies and officials of upcoming MTP and TIP updates and request any plans/studies/documents that might be pertinent to the MTP or TIP update.</p> <ul style="list-style-type: none"> NWARPC notified government and local organizations regarding the upcoming MTP and TIP and requested information through email and phone calls. NWARPC also posted information on updates to the TIP and MTP documents on its website at: https://nwarpc.org NWARPC staff notified organizations through email and verbally during virtual meetings that the draft MTP was available for review and comment during the 30-day comment period. NWARPC obtained the master street plans from multiple cities; trail count and cost information; proposed street and trail improvements for bond projects; Beaver Lake Shoreline Management Plan from the Corps of Engineers; conservation ordinance summary from City of Fayetteville; Beaver Watershed Management Plan from Beaver Watershed Alliance; studies from the Walton Family Foundation; Strategic Land Protection Plan from NWA Land Trust; and updated Heritage Trail Plan from Heritage Trail Partners.
<p>b) Compare the MTP and TIP to the Long-range Statewide Transportation Plan.</p> <ul style="list-style-type: none"> The draft 2045 MTP and the TIP are compatible with the ARDOT Long-range Statewide Transportation Plan.
<p>c) Compare the MTP to state conservation plans or maps, if available, and compare transportation plans to inventories of natural or historic resources, if available.</p> <ul style="list-style-type: none"> NWARPC compared the transportation plans to inventories of natural and historic resources in its GIS system. Also, a model run was done to produce high priority conservation areas base on the NWA Open Space Plan. When comparing the draft 2045 MTP to the State Bicycle and Pedestrian Plan and Accommodation Policy, the plans do not match the goals of NWA in regard to the facility types for active transportation. The Strategic Land Protection Plan from the NWA Land Trust is significantly different than the priority properties from the NWA Open Space Plan.
<p>d) Incorporate information from federal, state and local agencies and officials as appropriate in the draft MTP and TIP and request comments, suggestions, changes, etc., and</p> <p>e) Incorporate information into the final MTP and TIP.</p> <ul style="list-style-type: none"> Information that was deemed appropriate was incorporated into several chapters in the draft MTP.
<p>NWARPC will have full discretion on the timeframe for the above process.</p>

The draft MTP was discussed and information requested via phone calls and emails. Additionally, the draft MTP was presented/discussed at several committee meetings. The table below shows organizations that were contacted via phone calls and emails, as well as committee meeting dates.

PHONE CALLS	EMAILS	MEETING ANNOUNCEMENTS
HTP	WFF 10.2.20_regarding studies	Technical Advisory Committee: 10.15.20, 11.19.20, 12.17.20 and 12.21.21
IRWP	HTP 10.2.20_ regarding items to include	Active Transportation Cmte: 11.19.20 and 12.21.21
NWALT	Goddard Geographics 10.5.20_ trail info	Multi-basin meetings: 11.20.20 and 2.19.21
BWA	UA 10.9.20_regarding 2045 transportation, bike share, trail counts	Open Space meetings: 1.26.21 and 2.23.2021
BikeNWA	OS Coalition 10.21.20_general notification and request of information	Heritage Trail Partners meeting: 12.15.20
NWA TRAILBLAZERS	Ozark Land Trust 11.10.20_general notification and request of information	
	ACT 11.13.20_request for information	
	IRWP 11.13.20_request for information	
	HTP 1.28.20_general information	
	Multi-basin 11.20.20_general information	
	PRNMP 12.30.20_general information	
	PeopleforBikes 12.30.20_general information	
	City of Rogers 1.8.21_trail counts	
	Tom McClure 1.12.21_photos	

SUMMARY

- ❖ It’s estimated that approximately 2,600+ individuals attended the outreach activities, while over 1,000 people were reached through social media. Input was gathered throughout the region and regardless of where the outreach took place, many comments addressed transportation issues for the entire region, in addition to those community-specific concerns.
- ❖ While many informational items were posted on the NWARPC MTP web page, the first Draft MTP chapters began being posted online in mid-January 2021. The TAC and RPC/Policy Committee were invited to review and comment on the draft chapters.
- ❖ Community outreach and input continued throughout the entire MTP development process, culminating in a virtual Final Public Open House held virtually on January 27, 2021. The purpose of this session was to present the Draft MTP through posters, maps, and interaction with staff, and receive comments from the public.
- ❖ A 30-day public comment period ran from January 28, 2021 through February 28, 2021. The TAC met virtually on March 18, 2021 and recommended adoption of the Draft NWARPC 2045 MTP to the RPC/ Policy Committee who met virtually on March 24, 2021 and adopted the MTP.
- ❖ Notices for the meetings were published through advertisement with the local newspapers and press releases were developed and distributed to all local media outlets, which attracted great interest for the plan. In addition, email notification was given to government agencies, special interest groups, local officials, business leaders, NWARPC committees, news media, and other interested citizens. Social media and website posts also provided meeting notices.

CONCLUSION

Northwest Arkansas was able to meet the challenge of involving the community during the development of the MTP through input sessions in the community as well as regular media attention to engage citizens in the development of a long-range transportation plan. NWARPC has taken effective action in engaging the public in this process and the end result reflects the opinions of those who took the time and effort to provide input.

Involving the public in the decision-making process was an essential part in developing public consensus in the MTP. The public was invited to provide information, offer alternatives, present their interests and opinions, and react to the recommended MTP. This allowed important community concerns and technical issues to be identified and addressed. By using techniques outlined in the Public Participation Plan, NWARPC was able to engage the citizens of this region to participate in the development of a transportation blueprint for this region for future generations.

Even as the public indicates its preference for certain types of transportation modes and improvements, the fact remains that as the projected costs and anticipated revenues for the projects in the MTP were analyzed and updated, it became apparent that there were not enough anticipated resources to complete all of the listed improvements. To determine what would be “cost feasible” to build, the projects were evaluated by the TAC from a technical and financial perspective to determine the most crucial regional transportation needs. The RPC/ Policy Committee was informed of the project lists as recommended by the TAC and gave its approval to include these in the final MTP. Due to the fact that transportation needs are significantly greater than expected revenues, the issue of adequate funding and alternative funding will remain an issue for the region.

Many of the area’s citizenry highly support expanded transit, especially bus transit. In regards to transit projects, anticipated revenues determine the level of service. These revenues will only maintain the existing service. Without a dedicated funding source, transit service is at risk within the area. With dedicated funds, transit service will not only be preserved but may be expanded to adequately serve the entire region.

- “I’m happy with the progress on the Bella Vista Bypass. I can see headway every day!”
- “...cars are not the future, as we see in every successful and growing city.”
- “Spend less on interstate; spend more on connecting road improvements that link commercial areas with residential areas.”
- “...get more involved with land-use patterns and growth management policy across all municipalities and county government.”
- “Transit will never be cheaper to develop than now.”
- “We MUST look to maintaining the road network we have and investing heavily in alternative transportation modes. Please invest in mass transit, biking and walking infrastructure...”
- “These are the priorities as I see them: 1. Finish the 412 Bypass from the west side to the east side of Springdale. 2. A real highway to XNA. For bike paths: 1. Extend the Razorback trail to the state line of Missouri. 2. Safer east/west trails. 3. A tax on any bike sold over \$500.00.”
- “Some of the bike infrastructure is being overbuilt.”
- “Implementation of cameras on traffic signals would be a huge benefit.”
- “Put the rail down the center of I-49, eliminating the need to purchase R/W.”
- “Maintenance of existing roadways, expanding sidepath/trail system and connectivity, creating a better grid system are my personal priorities for transportation in our region.”
- “We need to prepare for our region’s population to double by 2045.”

PUBLIC COMMENT REPORT

PUBLIC COMMENT REPORT, MARCH 2021

❖ PUBLIC PARTICIPATION PLAN (PPP)

The NWARPC 2045 MTP was developed using the procedures outlined in Chapter X. of the Public Participation Plan, and it requires that a Public Comment Report, following the Final Public Comment Period, be delivered to the Technical Advisory Committee and the NWARPC/Policy Committee when there are substantial comments.

❖ DRAFT NWARPC 2045 METROPOLITAN TRANSPORTATION PLAN (MTP) ADOPTION TIME LINE

The Draft MTP was presented virtually to the Technical Advisory Committee (TAC) and the public on December 17, 2020.

A legal notice was published in the Democrat Gazette on January 10, 2021 announcing the Final Public Forum/Open House, the Public Comment Period and how to comment, and the TAC and NWARPC/Policy Committee meetings where the Draft MTP would be discussed. The same legal notice was published in the La Prensa Libre and the McDonald County, MO Press on January 14, 2021. A Display Ad was published on January 17, 2021 in the Democrat Gazette containing the same information. Flyers were placed on public transit buses announcing the Draft MTP virtual Final Public Forum/Open House and the Public Comment Period, and how to comment. Emails were sent to all interested parties, and a notice was posted on social media and the NWARPC web site.

The TAC met virtually on January 21, 2021 and recommended the Draft MTP to the NWARPC/Policy Committee for consideration at its next meeting.

A Final Public Forum/Open House was held virtually during the NWARPC/Policy Committee on January 27, 2021. The NWARPC/Policy Committee approved the Draft MTP to go a Public Comment Period.

A 30-day Public Comment Period was held from January 28, 2021 through February 28, 2021. A Public Comment Report was developed and supplied to the TAC and NWARPC/Policy Committee. ARDOT and MoDOT also provided comments. Appropriate comments and suggestions were incorporated into the Draft MTP.

A Legal Notice was published in the Arkansas Democrat Gazette on March 7 and March 14, 2021 announcing virtual TAC and NWARPC/Policy Committee meetings in which each committee would vote on approval of the Draft NWARPC 2045 Metropolitan Transportation Plan. A legal notice containing the same information was published on March 11, 2021 in the La Prensa Libre and the McDonald County, MO Press.

For purposes of this report:

- The dates of the comments and the comments themselves are shown.
- **Red text** shows NWARPC responses to comments (when appropriate).
- **Red text with yellow highlights** shows NWARPC intent to address the comments within the MTP.

DATE	COMMENTS
1.14.21 Via email	<p>First: Any movement or plans you could make toward a connected public transit system for all of Northwest Arkansas including the airport would be much appreciated. The two main ways this could be accomplished appear to be:</p> <ol style="list-style-type: none"> 1. Bus Rapid Transit, probably along old US Highway 71 connecting several downtowns, probably using a special bus lane and quick passenger entry and exit. 2. Commuter rail. <p>Second: Why can't we get passenger rail from Little Rock through Alma and then up to NWA? Our family would travel to Little Rock and Kansas City for vacations if we could get there by train. I think many others feel the same way. If America were connected by trains, we would vacation here instead of in Mexico and Europe as we usually do.</p>
2.2.21 Via email	<p>Chapter 1 INTRODUCTION</p> <ul style="list-style-type: none"> ❖ OVERVIEW OF TRANSPORTATION LEGISLATION <p>This overview is intended to highlight the federal transportation legislation, a further discussion of public transit can be found in Chapter 11, Public Transportation.</p>

	<ul style="list-style-type: none"> • After the discussion of the MAP-21 Bill and its National Goals and Planning Factors, we need to discuss the transit relevance of the State enabling legislation permitting the establishment of Regional Transit Authorities (Public Transit System Act 14-334-101) and the local Ordinances (Fayetteville Ordinance No. 4418, etc.) in acted to designate Ozark Regional Transit (ORT) as the NWA Regional Transit Authority. We should also discuss some of the administrative actions ORT has taken and will take to evolve ORT into the Ozark Regional Transit Authority (ORTA). <p>❖ METROPOLITAN PLANNING ORGANIZATION (MPO)</p> <ul style="list-style-type: none"> • Expand paragraph eight (which starts with “In the years since...”) by adding reference to the recent NWA Regional Transportation Survey findings that those who expressed an opinion on their overall level of satisfaction, 77% were dissatisfied with the flow of traffic at peak times and 74% were dissatisfied with the availability of Public Transit (Survey Q2). In addition, we should add that the survey findings identified the “Flow of traffic on streets during peak times of day” and the “Availability of public transit” as the top two transportation issues that the respondents felt that community leaders should emphasize over the next ten years (Survey Q3). • After the narrative about the NWARPC’s role as the Region’s MTO add some additional narrative about the staff support the NWARPC is currently providing ORT and how the NWARPC support will change as ORT evolves into the ORTA. We should also discuss the timing of the ORTA evolution and its relationship with the updated 10 YR TDP (Connect Northwest Arkansas) implementation schedule. The discussion in Chapter 1 is high-level; a better place to put this discussion would be in Chapter 11 – maybe within the ORT section; or at the end of the chapter. <p>❖ 2045 METROPOLITAN TRANSPORTATION PLAN RECOMMENDATIONS</p> <ol style="list-style-type: none"> 3. Adhere to Cross-Section Guidelines <ul style="list-style-type: none"> • Add a second bullet that adds a new recommendation to adhere to the recently adopted 10YR TDP (Connect Northwest Arkansas) Bus Stop Standards, Street Cross-Sections and the guidelines for the application of transit Mobility Hubs. 4. Update the 2015 Congestion Management Process The CMP is in the early stages of being updated. We will update the Tasks are identified in the new scope of work. <ul style="list-style-type: none"> • Add transit alternatives (Fixed Route Bus, Bus Rapid Transit, Light Rail, and Commuter Rail) and Land Use Planning (Infill Development, Downtown Development, Transit Oriented Development, etc.) to the list of common mitigation categories identified in Task 6 • Add an activity to Task 7 that involves the use of forecasted Annual Average Daily Traffic counts for region Freeway and Arterial Street sections and street section capacity standards to calculate milestone dates when Program and Implementation Strategies needed to be initiated, 7. Begin a regional discussion on self-driving cars, and the impact this technology may have on transportation infrastructure in the future. <ul style="list-style-type: none"> • Regarding the sentence above, add Electric Vehicles (passenger car and transit) to the regional discussion. • Regarding the second bullet, link the start and completion of the envisioning activity, of the role of transit, to the implementation schedule of the recently adopted 10YR Transit Development Plan (Connect Northwest Arkansas). 11. Explore funding options for bus and fixed guideway service, <ul style="list-style-type: none"> • Add a second bullet that calls for the addition of a Transit Planner position to the NWARPC or ORTA organization to develop transit funding sources, implement the recommendations of the NWARPC “Alternative Analysis Study”, coordinate the land use planning efforts of member jurisdictions to make the Region transit ready and coordinate the efforts of member jurisdictions in implementing Transit Oriented Design practices. Unable to add this type of “position” into the MTP – it is a staffing issue that the RPC/Policy Committee would have to approve. • Add a third bullet that calls for ORTA to engage with major employers in the Region to explore opportunities to partner in the funding of commuter transit services.
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2.2.21
Via
email

<p>Chapter 2 VISION, GOALS, AND 2045 MTP FRAMEWORK The TAC and RPC/Policy Committee were presented with the Vision and the Goals and Objectives at their June 2020 meetings. The consensus at both meetings was that the Vision and Goals were appropriate and adequate.</p> <p>❖ 2045 MTP Vision</p> <ul style="list-style-type: none"> • Incorporate the following two terms in the vision statement; sustainable and environmental justice. Chapter 5 includes the Environmental Justice discussion. • Incorporate in the vision statement the concept of the need to make a paradigm shift from the past emphases on resolving road congestion issues through road construction to the increasing application of transportation alternatives and land use planning techniques. <p>❖ 2045 MTP Framework</p> <ul style="list-style-type: none"> • The Goals as presented in the MTP mirror the national and state DOT goals, and as such, will not be changed substantially from what is in the MTP at this time. • The performance measures used in the MTP are set by state DOTs – and the information is provided by them. NWARPC does not have the capacity to add to these at this time, since these measures must be quantified and reported on.
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- The NWARPC adopts all these PMs by resolutions, and these are the PMs that are given to us by the DOTs.
- However, the following highlighted text will be inserted.

MTP GOAL I: No changes requested.

OBJECTIVE 1-5: No changes requested.

Goal I Performance Measures:

- Add improve transit employee safety.
- Add improve response time to emergency dispatch calls (both vehicular and transit).

MTP GOAL II: No changes requested.

OBJECTIVE 1-5: No changes requested.

Goal II Performance Measures:

- Add increase transit equipment preventative maintenance.
- Add improve response time to address transit equipment complaints.

MTP Goal III:

- Insert “road and transit” between the words “existing” and “facilities”.

OBJECTIVE: No changes requested.

SUBJECTIVE 1 through 4: No changes requested.

- Add the following SUBJECTIVE 5: Expand the CMP to incorporate the application of transportation alternatives and land use planning techniques to address road congestion issues. NWARPC will look at this suggestion when working on the CMP scope of work.

OBJECTIVE: No changes requested.

SUBJECTIVE 1 through 4: No changes requested.

OBJECTIVE: No changes requested.

SUBJECTIVE 1 through 4: No changes requested.

Goal III Performance Measures:

- Add decrease the vehicle time spent in congestion.
- Add decrease the cost of congestion,
- Add increase the internal connectivity of adjoin properties along key corridors.
- Add increase transit funding.
- Add increase sidewalk availability.
- Add increase trail availability.
- Add increase residential and commercial infill development activity.
- Add increase population within the Downtowns.
- Add increase population within 5 miles of the I-49 Corridor.
- Add increase population within a ½ mile of the 71B Corridor.
- Add increase population within a ½ mile of the Razorback Greenway,
- Add increase population within a ½ mile of the A&M RR ROW.

MTP GOAL IV: No changes requested.

OBJECTIVE: No changes requested.

SUBJECTIVE 1-5: No changes requested.

OBJECTIVE – Enhance commerce. Revise objective to read; Enhance intercity commerce and passenger service within the region and mega region.

SUBJECTIVE 1-3: No changes requested.

- Add the following SUBJECTIVE 4: Begin a regional discussion on connecting the Northwest Arkansas Metropolitan Area to High-Speed Rail network serving our Mega Region and the Nation. The discussion needs to begin with the state – since it’s obvious the the cost is prohibitive to

MTP Goal IV Performance Measures:

- Add increase transit routes.
- Add increase transit stops.
- Add improve on time (start and arrival) performance of transit.
- Add maintain transit service availability.
- Add increase Percent of jobs served by transit within ¼ mile.
- Add increase the number of member jurisdiction Master Street Plans that incorporate Transit infrastructure elements (Transit Stops, Mobility Hubs, Stations, etc.).

MTP GOAL V: No changes requested.

OBJECTIVE: No changes requested.

SUBJECTIVE 1-3: No changes requested.

OBJECTIVE: No changes requested.

SUBJECTIVE 1-3: No changes requested

- Add the following SUBJECTIVE 4: Encourage transit agencies to plan and efficiently implement the timely transition of their transit fleet to Electric Vehicles.

MTP Goal V Performance Measures:

- Add Decrease the number of commuters traveling by automobile,

- Add Increase the number of commuters traveling by public transit.
- Add Increase the number of commuters traveling by active transportation.
- Add increase the percent of electric transit vehicles.
- Add decrease the amount of Green House Gas (GHG) emissions.

2.9.21
Via
email

Chapter 3 POPULATION AND LAND USE
❖ Add the following section on Transit Readiness and its Metrics:

- Accomplishing Transit Readiness in the NWA Region needs to be a formal land use planning effort by the NWARPC, ORTA, Fayetteville, Springdale, Rogers and Bentonville to plan and implement urban development strategies that integrate transit and land use planning in an effort to encourage transit supportive development and the establishment of land use patterns, urban densities and a multi model transportation network in concert with, and in anticipation of, future transit services and infrastructure.
- Transit Readiness is important because the over-reliance on automobiles for transportation has a detrimental effect not only on household costs, but also on the environment. **Increasing access to alternative forms of transportation, including transit, can reduce commuting costs for residents and improve air quality by reducing the number of vehicle miles traveled. Included in Chapter 3, Summary of Changing Demographics.**
- The MTP has presented recommendations that will further the Transit Readiness of the Metropolitan Region in Chapter 2. The table below illustrates potential Transit Readiness Metrics for the Region (REG), Fayetteville (FAY), Springdale (SPR), Rogers (ROG) and Bentonville (BEN). **Addressed in TDP page 11-15 ATG calculated it by city.**

Regional Transit Readiness		REG				
% Pop within 5 miles of the I-49 Corridor.		XX%				
% Jobs within 5 miles of the I-49 Corridor.		XX%				
% Pop within the Downtowns.				XX%		
% Jobs within the Downtowns.				XX%		
% Pop within ½ mile of the A&M RR ROW.		XX%				
% Jobs within ½ mile of the A&M RR ROW.		XX%				
% Pop within ½ mile of the Razorback Greenway.		XX%				
% Jobs within ½ mile of the Razorback Greenway.		XX%				
Local Transit Readiness		FAY	SPR	ROG	BEN	
% Pop within ½ mile of existing transit routes.	XX%	XX%	XX%	XX%	XX%	
% Jobs within ½ mile of existing transit route.	XX%	XX%	XX%	XX%	XX%	
% Pop within ½ mile of Reg/Neigh Centers.	XX%	XX%	XX%	XX%	XX%	
% Jobs within ½ mile of Reg/Neigh Centers.	XX%	XX%	XX%	XX%	XX%	
% Pop within ½ mile of existing Trails.	XX%	XX%	XX%	XX%	XX%	
% Jobs within ½ mile of existing Trails,	XX%	XX%	XX%	XX%	XX%	

2020 TABLE of Regional and Local Transit Readiness Metric Values

Table Note to NWARPC:
The metrics presented in the table above need to be formalized between the NWARPC, ORTA and the four City Planning Organizations. We can create a baseline year using 2020 Census Data and update the table values every five years. The NWARPC, ORTA and the four City Planning Organizations can use the changes in the metric values to help guide policy and program efforts to improve the metric values and trends.

2.9.21
Via
email

Chapter 6 ENVIRONMENT
❖ **Introductory Section on page 6-1:**
Add a comment regarding the issue of managing Greenhouse Gas Emissions (GHG) for various activities occurring in the Metropolitan Region and the member Cities of Fayetteville, Springdale, Rogers and Bentonville. We should comment on the leadership of the City of Fayetteville regarding this issue through the adoption of an [Energy Action Plan](#) on January in 2018. Their Energy Action Plan is structured around one overarching goal of reducing Greenhouse Gas Emissions (GHG) for critical activities occurring in Fayetteville. The plan outlines strategies, goals and actions in the critical activities of transportation, energy supply, buildings and waste. The Plan states that transportation activities account for 27% of Fayetteville’s Green House Gas emissions between the 2010 and 2016 inventory years, The adopted Plan includes the following transportation related goals:

1. Reduce total housing and transportation costs to 45% of area median income. **This is addressed in Chapter 1 and Chapter 3.**
2. Reduce per capita vehicle miles traveled to 2010 levels by 2030.
3. Achieve 25% bike/walk/transit mode share by 2030. **NWARPC updated the Travel Demand Model to calculate mode share by jurisdictions and this is discussed in Chapter 8.**

- Add a comment regarding the need for Springdale, Rogers, Bentonville and the NWARPC develop a similar Energy Action Plan and adopt the same three transportation related goals. **There are no plans to**

include this suggestion in the plan since no discussion has occurred on this topic to date. NWARPC will reach out to begin a regional conversation.

2.9.21
Via
email

Chapter 7 TRAVEL PATTERNS AND TRAVEL FORECASTING

Page 7-24

Table 7-12 and 7-13 could be more informative if we incorporated additional information regarding Level of Service (LOS) similar to the graphic below.

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		70	Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. No delays
B		70	Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. No delays
C		67	Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. Minimal delays
D		62	Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. Minimal delays
E		53	Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. Significant delays
F		<53	Very congested traffic with traffic jams, especially in areas where vehicles have to merge. Considerable delays

Good comment – will add a graphic on LOS

Page 7-25

Figure 7-17 could be more informative if we incorporated additional information by color-coding the traffic volume line segments by Level of Service (LOS) classifications.

Will update the graphic.

We might also add some interpretive narrative discussing the potential impacts of I-49 operating at a D, E or F LOS on the issues of traffic safety, traffic congestion, Greenhouse Gas Emissions (GHG) and the potential costs of needing to add two more traffic lanes.

2.16.21
Via
email

Chapter 8 FACILITY DESIGN, MANAGEMENT AND OPERATIONS, AND SYSTEM PERFORMANCE

Page 8-13

- Need to add “Develop a TSMO Plan for NWARPC” to the MTP recommendations identified in Chapter 1. **The TSMO Plan is in the process of being updated. It is discussed in Chapter 8 on page 8-13.**

Page 8-17

- As additional Regional Level CMP performance measures consider adding:

- % Pop within ½ mile of the A&M RR ROW.
- % Jobs within ½ mile of the A&M RR ROW.
- % Pop within ½ mile of the Razorback Greenway.
- % Pop within ½ mile of existing transit routes
- % Jobs within ½ mile of existing transit route.
- % Pop within ½ mile of Reg/Neigh Centers.
- % Jobs within ½ mile of Reg/Neigh Centers.

	<p>% Pop within ½ mile of existing Trails. % Jobs within ½ mile of existing Trails,</p> <p>These will serve as an indicator of the accessibility (within the pedestrian- shed) to transit and active transportation. <i>See comment above.</i></p> <p>Page 8-22 Capacity <i>The CMP program is in the process of being updated. The Connect NWA vision addresses transit as an alternative by making transit compete with automobiles.</i></p> <ul style="list-style-type: none"> • Need to also reference that transit can play a role in addressing road capacity issues as an alternative to roadway widening. <p>Page 8-28</p> <ul style="list-style-type: none"> • In the table that identifies PERFORMANCE MANAGEMENT AND SYSTEM MEASURES we need to add the additional metrics that I added under selected Goal Performance Measures in my Chapter 2 comments. <i>See the NWARPC comment on performance measures in Chapter 2.</i> <p>Pages 9-29 to 8-32</p> <ul style="list-style-type: none"> • Under Safety we need to add a discussion of fatalities and injuries for transit compared to other modes of transportation and add fatality and serious injury data to the appropriate tables and graphs to show multimodal comparative statistics. <i>The transit safety measures are on Page 8-39 and they are specific PMs adopted for transit only, by resolutions. The transit agencies adopted transit safety plans, the NWARPC adopted these on Jan 27, 2021.</i> <p>Page 8-35</p> <ul style="list-style-type: none"> • Under Transit Asset Management we need to add a discussion on the benefits and need to adopt and integrate Electric Vehicle Technology into the management of our Region’s transit fleets. <i>NWARPC does not tell the transit agencies what fleet vehicles to buy, and the transit agencies don’t have any plans at the moment to replace their fleet with Electric Vehicle Technology. ORT just bought a brand-new fleet (\$3.6M federal) and it cannot replace them until their useful life is over.</i>
<p>2.23.21 Via email</p>	<p>Chapter 9 TRANSPORTATION PROJECTS AND FUNDING Introduction</p> <ul style="list-style-type: none"> • In Arkansas, only about 2% of the more than a billion-dollar annual State and Federal transportation project funding is allocated to transit related projects. Therefore, we need to add a statement recognizing the significant disproportionate application of State and Federal funding for transit related projects in light of the safety, environmental, economic and sustainability benefits public transit has over roadway development projects. Consequently, we need to recognize that we cannot fix our growing transportation congestion problem by emphasizing the funding of roadway construction projects over transit projects. <p><i>Connect NWA recommends a dedicated funding source for transit. In the MTP NWARPC can only show projects based on anticipated funding.</i></p>
<p>2.23.21 Via email</p>	<p>Chapter 11 PUBLIC TRANSPORTATION OZARK REGIONAL TRANSIT AUTHORITY (ORTA) Page 11-2</p> <ul style="list-style-type: none"> • Add a discussion of the ORTA “enabling legislation”; the State “Public Transit System Act” and the “Interlocal Agreement for the Creation of a Public Transit System to be known as Ozark Transit Authority”. Additionally, we need to comment on the critical reorganizational activities ORT needs to accomplish to successfully transition into the ORTA. An ORTA that can plan, operate and manage an integrated (Bus and Rail) Transit System for the NWA Metropolitan Region. We also need to address the desired timing of administrative activities like expanding its Mission Statement, making changes in its governance policies, identifying needed staffing changes to acquire needed expertise (i.e., Transit Planner, etc.). Finally, we need to consider recommending that ORT conduct a study of other Regional Transit Authority’s to build a complete understanding of a model organizational structure that they can use to guide their transformation in to a true Regional Transit Authority. <p><i>NWARPC will add some type of discussion of the enabling legislation in Chapter 9</i></p>



CHAPTER 5. ENVIRONMENTAL JUSTICE

INTRODUCTION

Environmental Justice (EJ) is a process that ensures that the minority and low-income populations are not excluded from policy-setting or decision-making processes with regards to transportation and are also not negatively impacted by environmental burdens.

The framework for the approach to environmental justice is found in Title VI of the 1964 Civil Rights Act. The Executive Order 12898, 'Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations' was signed on February 11, 1994. The Presidential memorandum accompanying EO 12898 identified Title VI of the Civil Rights Act of 1964 as one of several federal laws that should be applied 'to prevent minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects.' According to the U.S. Department of Justice, '...the core tenet of environmental justice – that development and urban renewal benefitting a community as a whole not be unjustifiably purchased through the disproportionate allocation of its adverse environmental and health burdens on the community's minority – flows directly from the underlying principle of Title VI itself'.

The Executive Order identifies minority populations as belonging to any of the following groups:

- » Black - a person having origins from any of the black racial groups of Africa.
- » Hispanic or Latino - a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- » Asian-American - a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- » American Indian and Alaskan Native - a person having origins from any of the original people of North America, South America (including Central America) and who maintain cultural identification through tribal affiliation or community recognition: or
- » Native Hawaiian and Other Pacific Islander - people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- » Minority population means any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed DOT program, policy of activity.

NWARPC 2045 Metropolitan Transportation Plan

The Executive Order defines low-income populations as those whose household incomes are at or below the U.S. Department of Health and Human Services poverty guidelines. There are three fundamental environmental justice principles:

- 1 To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- 2 To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- 3 To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

NWARPC ACTIVITIES

NWARPC's activities with regard to Environmental Justice are described in detail in two documents: The Public Participation Plan (PPP) and the Limited English Proficiency Plan (LEP).

The mobility needs of minority populations are identified through engagement efforts, data collection, and analysis of available Census data, public comment, and other available sources. The policy and guidance for public engagement is established in the NWARPC Public Participation Plan. NWARPC's policy for public engagement includes activities and outreach efforts such as soliciting the opinions of those under-served by existing transportation systems, including but not limited to, the transportation disadvantaged, minorities, elderly, low-income households, and people with disabilities. Also, NWARPC is committed to periodically reviewing adopted public comment processes to determine their effectiveness in assuring that the process provides full and open access to all, through surveys, public meetings, open houses, public notices, website posting, emails and public comments.

Data analyses using GIS and the Northwest Arkansas Travel Demand Model are key techniques used to identify and target underrepresented populations. NWARPC utilizes data for planning products and can identify other population groups by sex, age, persons per square mile, and persons over the age of 65, disabled population, zero car households, employment density and other population characteristics as needed.

The NWARPC's efforts in reaching people who have not been traditionally participating in the transportation process include translation and publication of all the public participation notices, surveys or announcements in Spanish on both the nwarpc.org website and the printed local media. NWARPC held public input meetings in public/community locations that were handicap accessible and accessible through public transit and pedestrian/bike facilities, such as public libraries or community centers. Online meetings were also made available to the general public due to Covid-19 pandemic restrictions.

The following measures were used to identify EJ populations in relation to transportation projects:

- Gathering and analyzing the 2010 Census Bureau's data, as well as the most recent ACS five-year estimates to depict the concentration and distribution of the minority and low-income populations across the MPA.
- Overlaying the 2045 MTP future road network with the population distribution estimates from the ACS to help determine where resources should be directed and recognize if environmental justice communities are adversely impacted or denied the benefits of the anticipated projects.
- Creating GIS maps and analysis of potential transit routes and stops that the two transit agencies in the region are planning in order to identify where minority and low-income population are concentrated in relation to these future routes.
- Coordinating with the communities that adopted the Northwest Arkansas Regional Bike and Pedestrian Master Plan and the Connect Northwest Arkansas 10-year Transit Development Plan in the development of pertinent data

and maps to identify areas of planned trails and transit routes that are accessible to minority and low-income populations.

Minorities Distribution

Maps 5.1 - 5.6 in this chapter display locations of higher concentration of populations considered to be minority ethnicities in Benton and Washington Counties, and the MPA portion in McDonald County, MO. These include the percent of African-American, Asian-American, Pacific Islands population, Hispanic population and Native American population.

Benton County

Higher concentrations of minorities in Benton County can be found west of I-49, east of Lowell and Rogers, in Springdale; south of Bentonville, the eastern part of Centerton and west of US 59 and in the western part of the county.

Washington County

The highest distribution of minorities in Washington County can be found in the cities of Springdale and Fayetteville. The tracts east of Springdale have the highest concentration of minority population in the two-county region.

McDonald County

In the McDonald County portion of the MPA, the minority population concentration is represented in the western tracts, mainly the city of Pineville, MO.

Analysis

An analysis of whether transportation projects either underserved or unduly impacted minority groups was performed by overlaying the developed list of financially constrained projects over a map depicting concentrations of minority groups. It was determined that the minority populations were neither underserved nor disproportionately impacted by adverse impacts.

Low-income Distribution

The distribution of low-income population is also represented in Map 5.7. The highest percentages of low-income tracts are in the cities of Fayetteville, Johnson, Springdale, Siloam Springs and Pineville, MO; an area east of Springdale; and in northeastern Rogers. Other high percentages of low-income population are in the northwestern part of Benton County and the southwestern part of Washington County.

Projects such as the Northwest Arkansas Razorback Regional Greenway have completed a thorough Environmental Justice Analysis to ensure that minorities or low-income populations have not been adversely impacted by the project. The Razorback Regional Greenway is a multi-use shared-use trail that passes through an area of Springdale where low income and minority population residents live. The EJ analysis completed for this project provided the recommendations, analysis, and decision-making for the trail location of the Razorback Regional Greenway through this area, discussed the populations affected by the route and alignment, defined the impacts and benefits of the Greenway to these populations, and addressed other issues that have been resolved by the project sponsor and design team. The complete *Environmental Justice Analysis Northwest Arkansas Razorback Regional Greenway* document can be found at the [following link](#).

Transportation plans such as *Connect Northwest Arkansas – a 10-year Transit Development Plan* developed and adopted in 2020 identified both transit potential and need and ensured that while *Connect NWA* would work towards improving transit for everyone in the region, the region needs to take measures to maintain and improve connectivity for the most vulnerable populations of the region. This transit need is characterized by identifying areas with greater portions of the population who are low-income, minorities, elderly, disabled, and others and may face challenges related to transportation.

The transit need analysis in this plan assessed the study area’s demographic characteristics to understand where people who are more likely to be dependent on public transportation are located throughout the region. Two subsets

of the study area population were defined in order to generate a better understanding of the region's transit needs: Transit-Dependent Population and Target Transit Rider Population (TTRP). These subsets create a measure of the

regional population who are more likely to rely on transit in comparison to the rest of the community. Transit-Dependent Population and TTRP measures are critical to the transit planning process because they show where in the study area transit service accessibility is important for everyday mobility.

Transit-Dependent Population

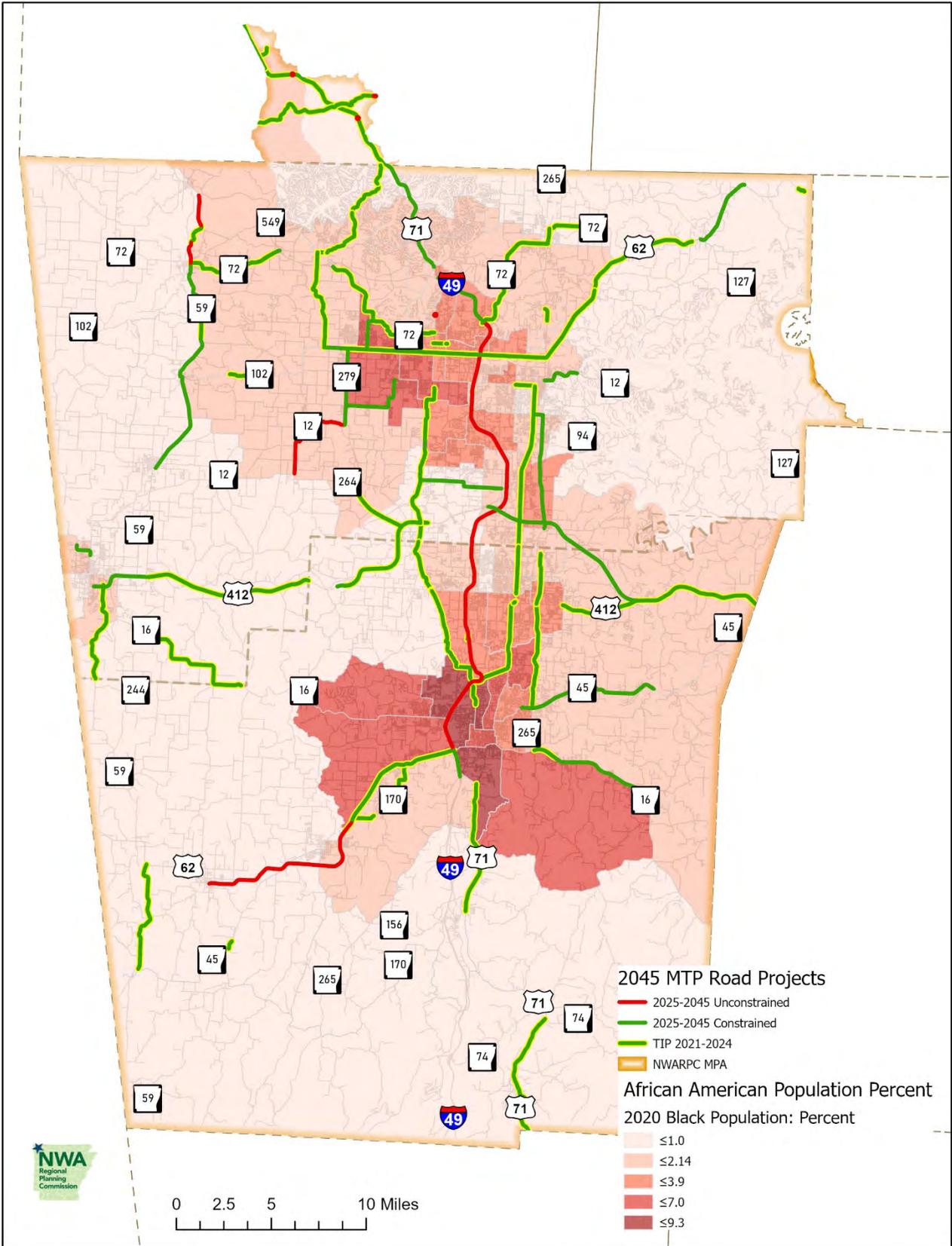
The Transit-Dependent Population from the *Connect NWA* analysis results were determined based on a formula which quantifies the number of people in a community who are most likely to depend heavily on transit as their primary mode of transportation. Accordingly, Transit-Dependent Population measured captive riders (i.e., those whose mobility is almost entirely dependent on public transportation), therefore quantifying regional transit demand. The Transit-Dependent Population formula used in this analysis incorporates characteristics related to the legal ability (i.e., too young to drive) and access to a personal vehicle. The study used a three-step formula derived from the U.S. Department of Transportation (USDOT) to locate larger concentrations of driving-age citizens with limited to no access to personal automobiles. The analysis used information from the census block group level and the 2017 American Community Survey (ACS). The ACS data provides detailed demographic information applicable to Transit-Dependent Population calculations not attainable from the decennial census. The following displays the USDOT formula step by step:

- 1. Household Drivers = (Population Aged 18 and Over) - (Persons Living in Group Quarters)**
- 2. Transit-Dependent Household Population = (Household Drivers) - (Vehicles Available)**
- 3. Transit-Dependent Population = (Transit-Dependent Household Population) + (Population Aged 17 or Under) + (Non-Institutionalized Population Living in Group Quarters)**

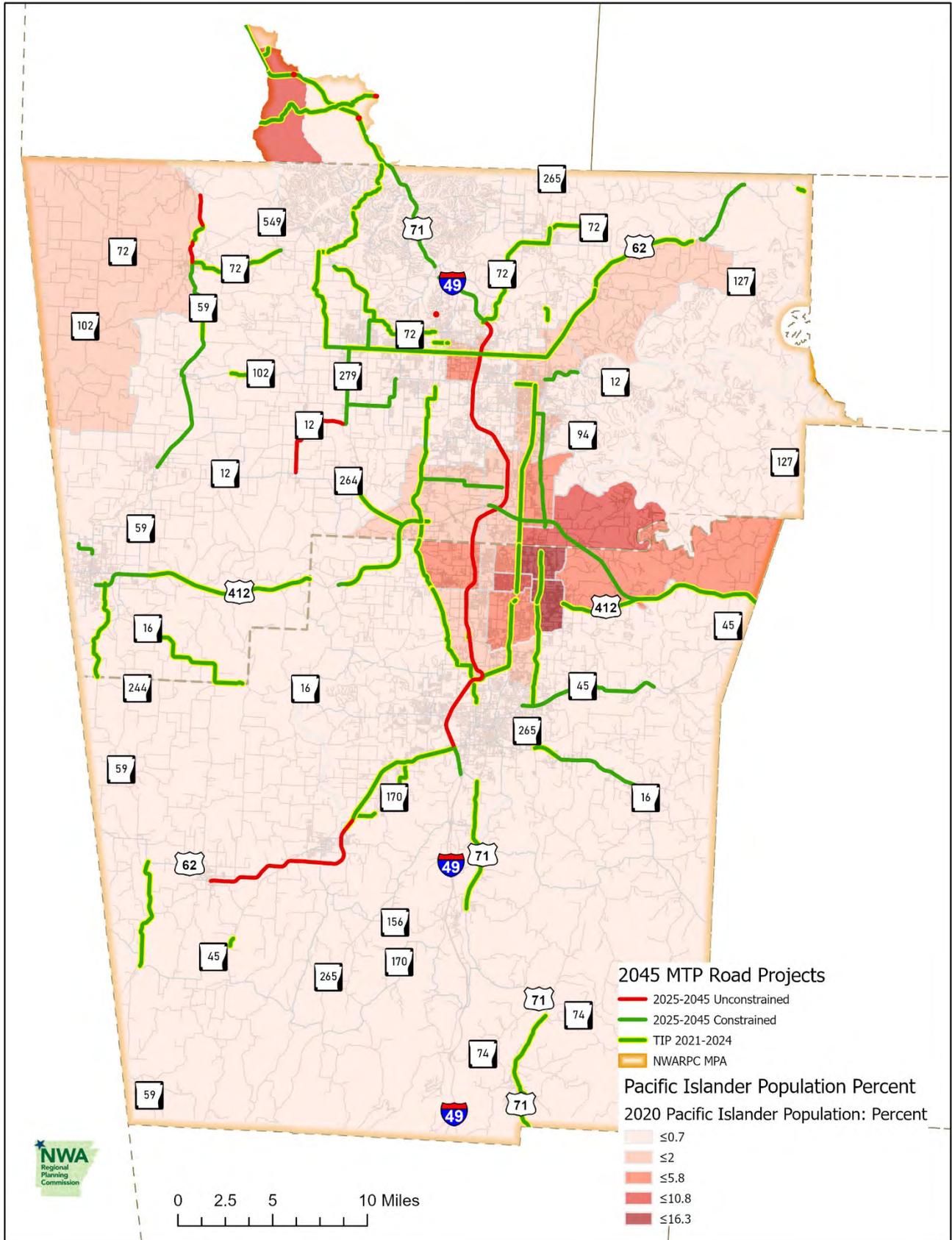
Step 1 of the formula identifies the number of people living in households who are legally eligible to drive based on their age. Population in Group Quarters is subtracted in this part because group quarters are not considered households. It is important to note that even though 16-and 17-year-olds may be legally eligible to drive, they are less likely to have regular access to a personal vehicle to accommodate most of their transportation needs. The ACS also does not provide data sets with breaking points at the age of 16.

Step 2 of the formula uses the results from **Step 1** to identify the number of eligible drivers who do not have a personal vehicle available to them. This group of people will be more likely to rely on transit.

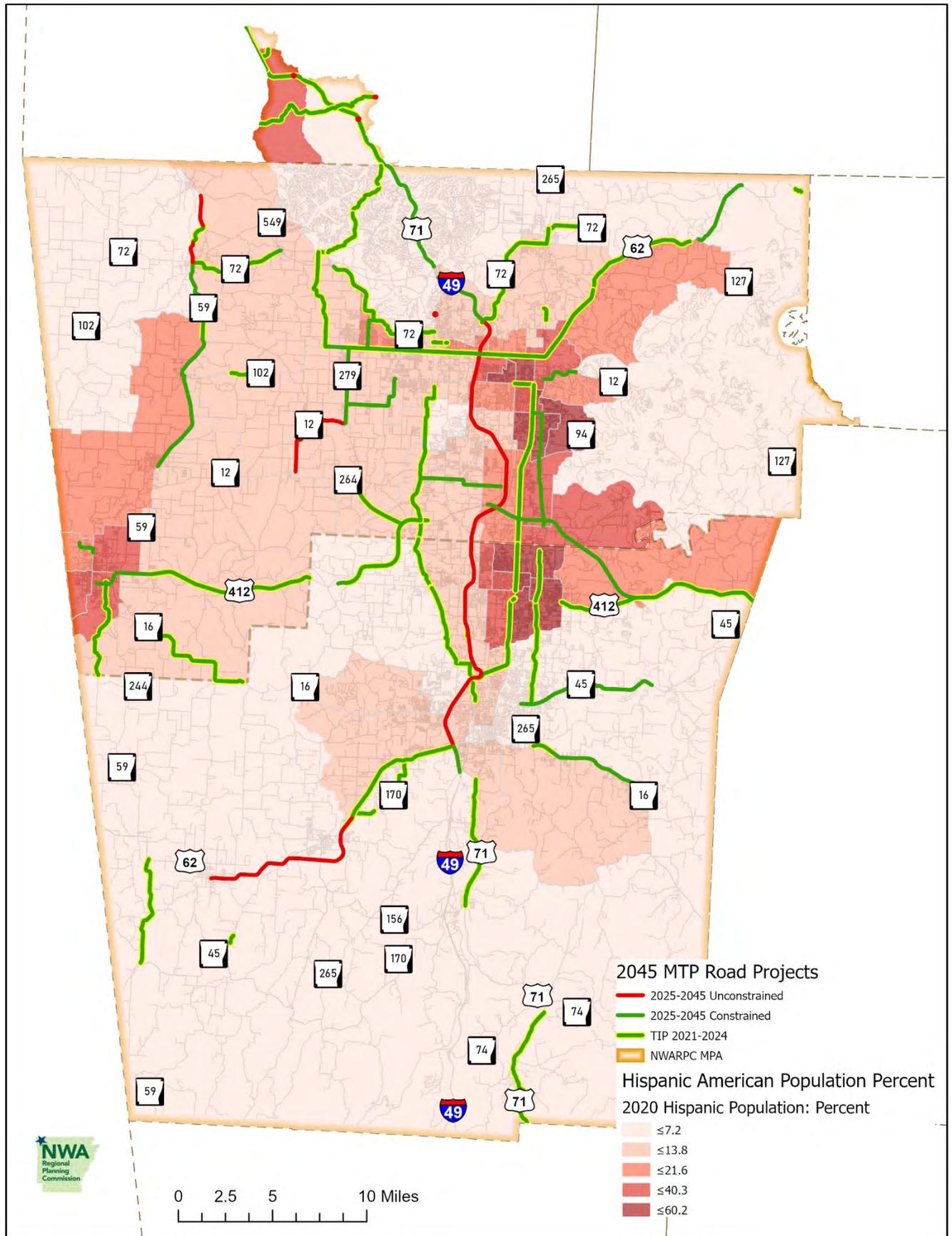
Step 3 of the formula determines the final Transit-Dependent Population by adding the results of **Step 2** to the population who is legally too young to drive or have regular access to a vehicle, as well as the population living in non-institutionalized group quarters. While people living in institutionalized group quarters are not able to drive for legal or health reasons, people living in non-institutionalized group quarters may be eligible to drive but are less likely to do so. It should be noted that the 2017 ACS data on group quarters does not distinguish between institutionalized and noninstitutionalized, so these figures were estimated using the group quarters data from the 2010 decennial census based on proportions per block group. The combination of the three demographic groups that make up **Step 3** of the formula identifies the total number of people that are either unable to drive or highly unlikely to drive, making them more dependent on transit. For the full analysis of Transit Dependent Household Population, see [Chapter 2 in the *Connect NWA*](#) document.



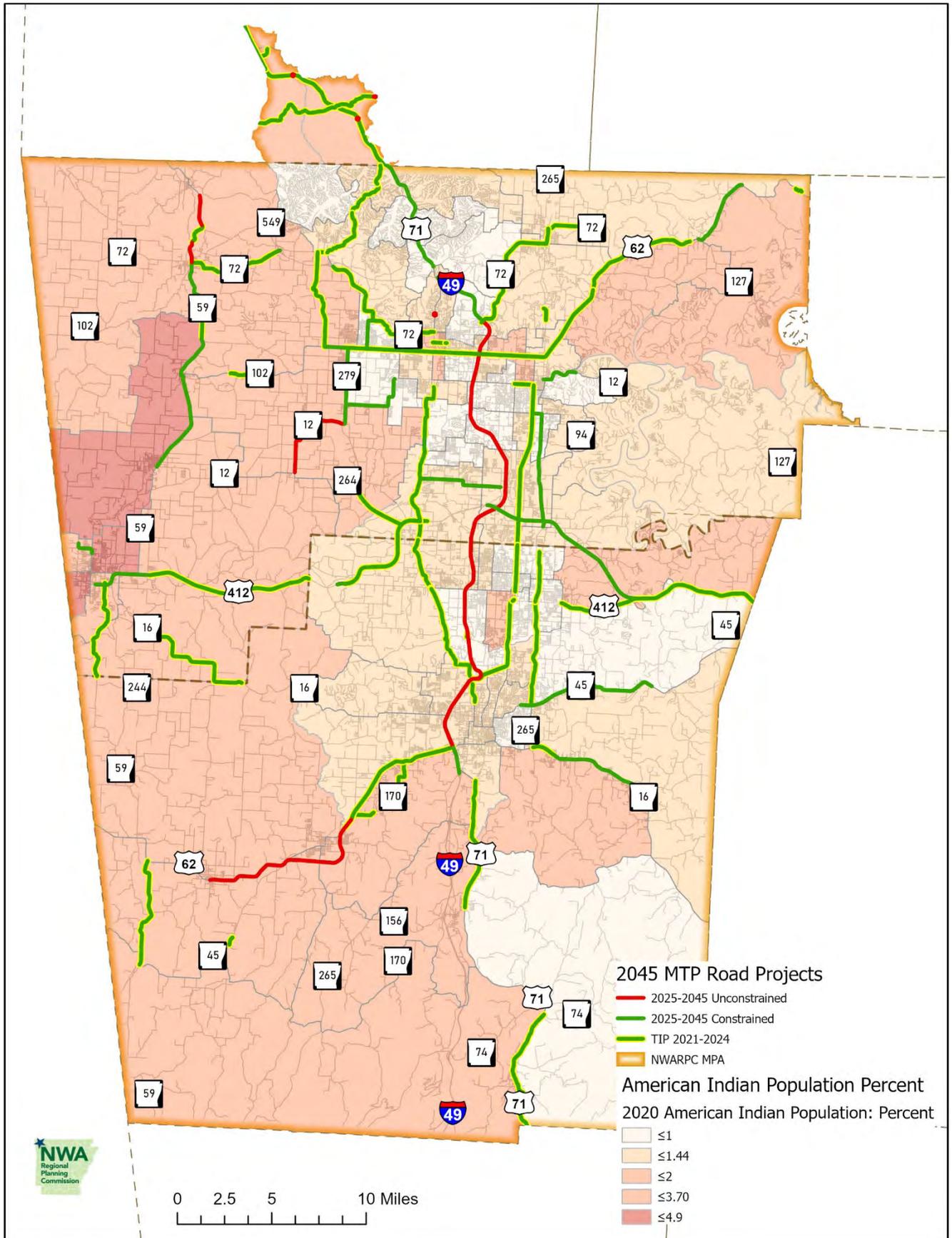
MAP 5.1 - African American Population – 2045 Road Improvement Projects



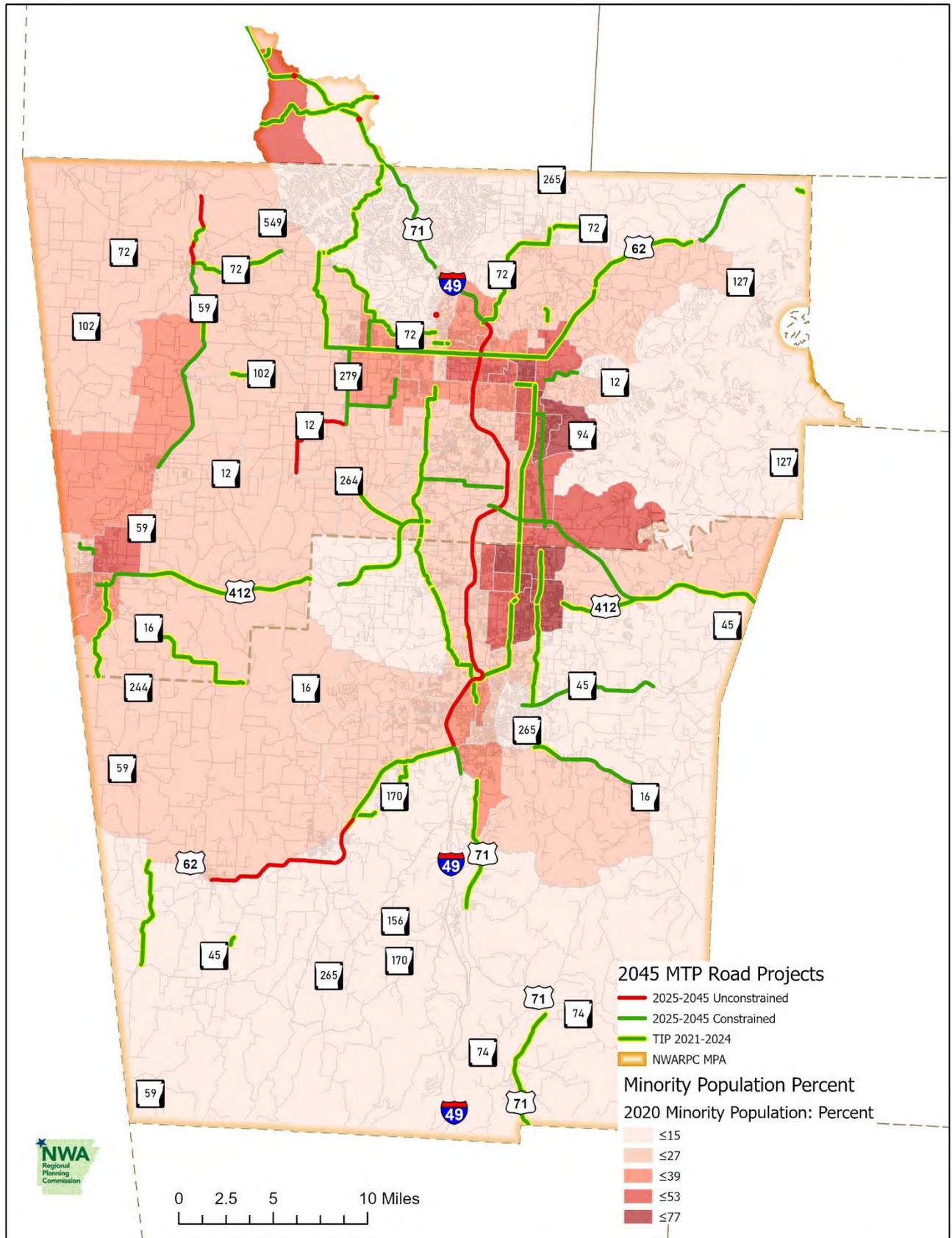
Map 5.3 - Pacific Islander Population – 2045 Road Improvement Projects



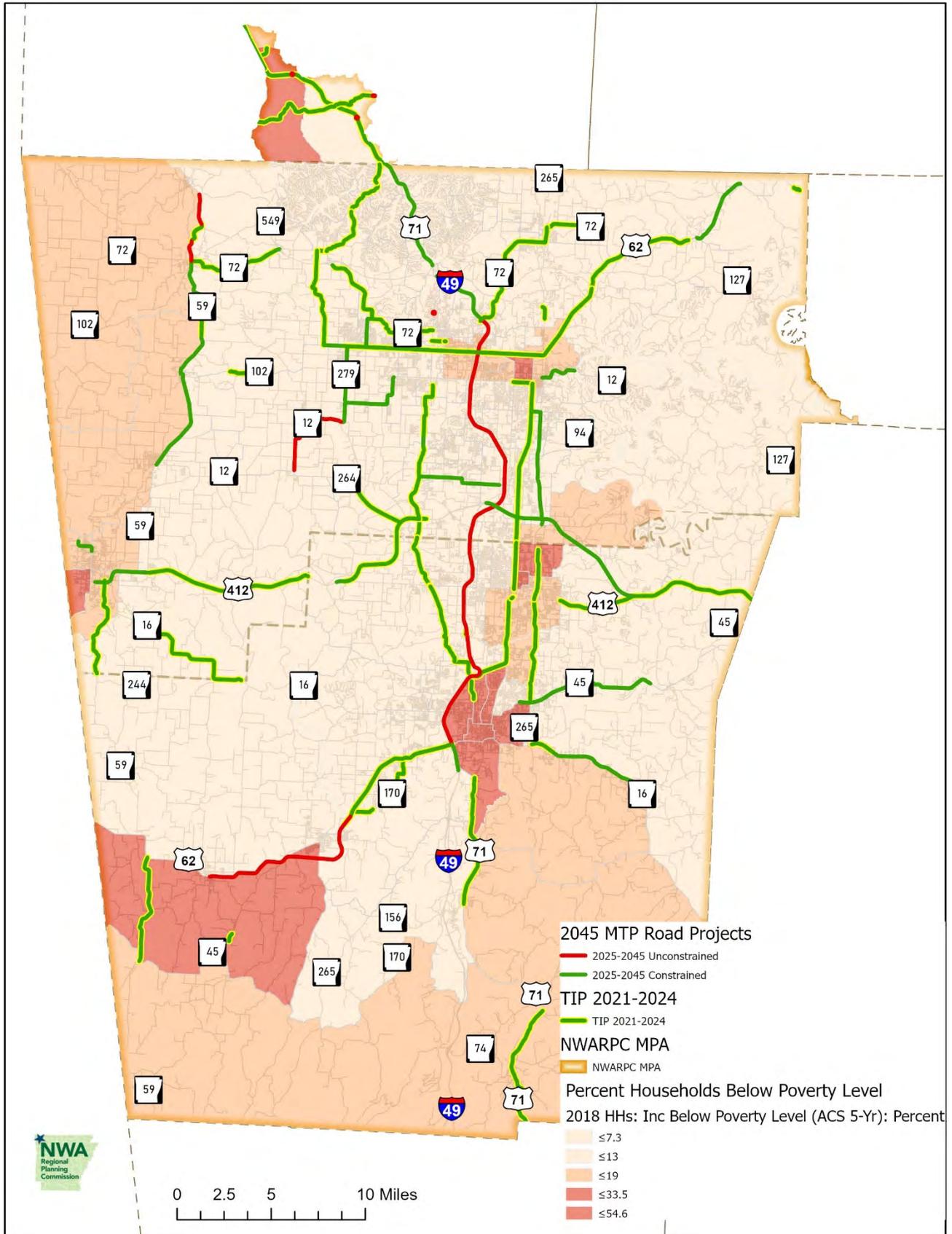
Map 5. 4 - Hispanic Population – 2045 Road Improvement Projects



Map 5.5 - Native American Population – 2045 Road Improvement Projects



Map 5.6 - Minority Population – 2045 Road Improvement Projects



Map 5.7 - Population Below Poverty Level – 2045 Road Improvement Projects



Photo credit: Bald Eagle by Alan Bland

CHAPTER 6. ENVIRONMENT

The natural environment has become increasingly important in the transportation planning process. Environmental assessment studies are often required for transportation projects in order to ensure that impacts on wildlife habitats and natural resources would be mitigated as much as possible. The Northwest Arkansas region faces typical environmental challenges such as soil erosion during road construction or impact on water quality and, as a result, there is an increasing need to protect the habitats of unique species such as the threatened Ozark Cavefish (*Amblyopsis rosae*) and to protect ground-water recharge areas as the region continues to grow. Important environmental factors to consider for transportation planning purposes include expanding urban land area, the widening and building of new roadways, and the choice of travel modes.

Transportation and the environment are linked through runoff from roadways and pollution through vehicle emissions. Transportation is one of the largest factors related to energy and emissions. Energy conservation can help reduce total daily pollution output. Solutions such as investing in public transportation can help cut down on emissions released into the air. Environmentally friendly pre-construction and construction considerations will also assist our transportation environmental impact. Technology continues to quickly improve and ideas such as autonomous vehicles and drone delivery will likely have favorable impacts on our environment.

The FAST Act, which was signed into law on December 4, 2015 is a transportation bill that includes Planning Factor 9: Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation and Planning Factor 10: Enhance travel and tourism. These elements have always been a consideration in the transportation process in NWA.

Northwest Arkansas has a rich cultural history. Transportation plans must also take historic and cultural factors into consideration as roadways are aligned or widened. Historic and cultural environmental factors of Northwest Arkansas include the Cherokee Trail of Tears, the Civil War trails and the Old Missouri Road/Old Wire Road/Butterfield Coach Trail. Historic buildings, battlefield sites, archeological sites, and cemeteries are additional examples of historic and cultural factors. It is important that these factors be considered when road alignments, the type of roadways, and the scale of roadways are chosen. For example, a limited access boulevard with a greenway median may be more appropriate than a five-lane highway through a historic-scenic area.

A series of studies and initiatives have been undertaken to address the environmental and cultural factors for preservation or mitigation in the region. Protecting and preserving our environment and promoting our rich natural resources, our cultural resources enhance the travel and tourism and the quality of life of the region.

Working with federal, state, local governments, non-profits, and organizations is necessary to determine what and how the environment is being impacted and what are the best ways to mitigate impact.

THE CAVE SPRINGS KARST RESOURCE CONSERVATION STUDY

Northwest Arkansas is an area of the State that has experienced unprecedented periods of growth over the last decade, most notably from 2003 to 2007. The location of the corporate headquarters of Wal-Mart, Tyson Foods, J.B. Hunt, and other companies in Northwest Arkansas has been the primary factor in this growth. The rapid population growth has strained the local infrastructure. As a result, many new transportation infrastructure projects have been proposed to keep pace with the residential and commercial development.

Some of the major proposed transportation projects include the additional phases of Hwy 412 Northern Bypass, Northwest Arkansas Regional Airport Access Road, an improved north-south travel corridor along Hwy 112, an improved eastern The existing development, the proposed transportation projects, and future development may affect local karst resources that support threatened and endangered species, as well as having potentially detrimental effects to groundwater and wildlife resources in general. This Study was undertaken to mitigate for any potentially adverse effects to sensitive resources resulting from possible secondary and cumulative development.

Cave Springs Cave is located in the northwest Arkansas community of Cave Springs, near the intersection of Highways 264 and 112 in southern Benton County. The Cave Springs Recharge Area encompasses lands that are included in the municipalities of Cave Springs, Rogers, Lowell, and Springdale and has a total recharge area of 12,515 acres (19.5 square miles).

Springs Cave provides habitat for the largest known population of Ozark Cavefish, a Federally listed threatened species. In addition to providing habitat for Federally protected species, water quality in the cave is an indicator of regional water quality in the shallow aquifer



Cave Springs Cave

NWARPC entered into a contract with Crafton and Tull in early 2014 to begin the Cave Springs Area Karst Resource Conservation Study. The study was completed in 2015 with the four municipalities including Cave Springs, Rogers, Springdale and Lowell adopting the Study recommendations. This project was unique with having four cities, four mayors, four city councils, and four planning commissions all working together to protect NWA ground water quality in the recharge area and advancing the protection of the known threatened and endangered species.

The Study consisted of three primary objectives:

Objective One was to seek out, consolidate and analyze existing water quality data; species population data; and development data in and around the Study area, defined as the Cave Springs Recharge Area. This information was used to determine trends and needs for additional data.

Objective Two was to work with the scientific community to determine appropriate actions necessary to ensure adequate protection of local karst recharge zones that support threatened and endangered species, and builds on previous efforts for karst conservation.

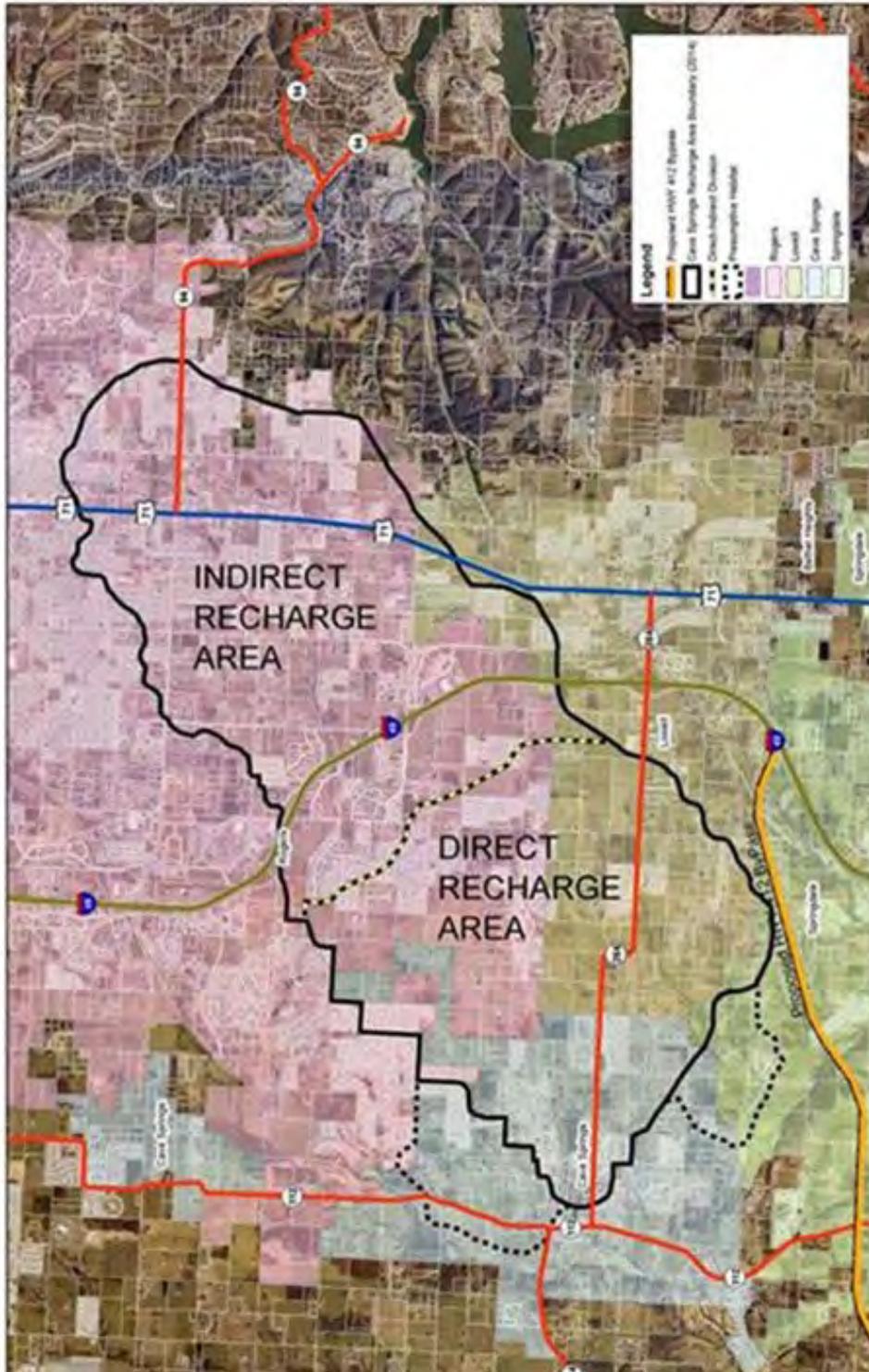
Objective Three was to work with local, county and State officials/administrators and other relevant stakeholders to determine and implement the best mechanisms to ensure that conservation actions are used effectively in the appropriate areas.

As part of the study, the Nature Conservancy and Ozark Underground Laboratory (OUL) performed an extensive literature review of cave hydrology, biology and water quality. Based on this Study, primary water quality goals for the Cave Springs Recharge Area are to limit discharges of oxygen-depleting contaminants, turbidity/fine sediments, nutrients, and metals to the groundwater system through the use of best management practices (BMPs). Additional criteria and guidance for BMPs to protect the unique karst resources of the Cave Springs Recharge Area were developed while allowing for future growth and development.

Map 6.1 shows the Cave Springs Recharge Area, which is comprised of two major areas:

The **Direct Recharge Area** includes 5,702 acres (8.9 square miles) and provides most of the recharge water for the Cave Springs cave system. This is an area where soils allow for relatively rapid recharge, and there is a direct hydrologic connection between infiltrating runoff and the karst system. The northeastern boundary of the Direct Recharge Area lies roughly parallel to, and west of, Interstate 49 (I-49).

The **Indirect Recharge Area** encompasses 6,813 acres (10.6 square miles) and lies to the northeast of the Direct Recharge Area. Groundwater tracing has shown that very little of the water from losing streams in this area reaches the Cave Springs cave system. However, the dye tracing indicates that there is some groundwater movement from the Indirect Recharge Area into the Direct Recharge Area and ultimately to cave Springs Cave. I-49 crosses the Indirect Recharge Area.



Map 6.1 Cave Springs Recharge Area

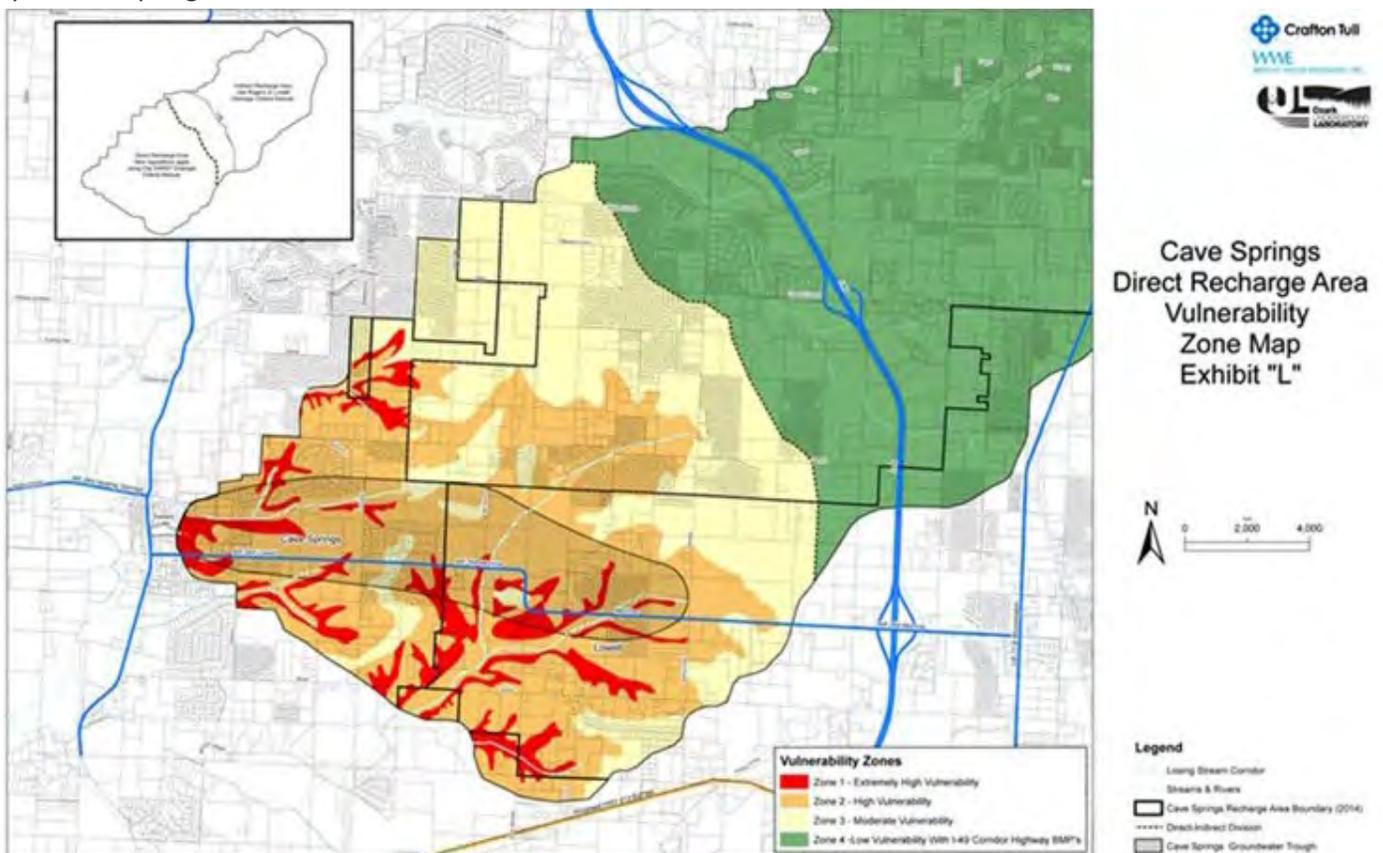
The Study also included a groundwater vulnerability assessment for the recharge area for Cave Springs Cave. The vulnerability assessment is based on the concept that not all lands pose equal risks of introducing contaminants into karst groundwater systems. Vulnerability mapping is based on physical and hydrogeologic conditions of the land being mapped. The approach permits planners and others to tailor the level of management attention to the likely severity of groundwater impacts from particular land uses.

The vulnerability of a karst groundwater system and its associated biological community is a function of the hydrobiological characteristics of its particular groundwater system and is intimately connected with land use within its recharge area.

The vulnerability map (Map 6.2) qualitatively depicts risks posed to groundwater quality by various portions of the direct and indirect recharge area. The Cave Springs recharge area was mapped to show the following categories of relative risk:

- Low Vulnerability Lands including lands within the Indirect Recharge Area for Cave Springs, with additional scrutiny required along the I-49 corridor;
- Moderate Vulnerability Lands including lands within the Direct Recharge Area with soils that have been classified as having good natural soil treatment capability;
- High Vulnerability Lands including lands within the Direct Recharge Area with soils that have been classified as having fair natural soils treatment capability; and
- Extremely High Vulnerability Lands including lands within the Direct Recharge Area with soils that have been classified as having poor natural soils treatment capability. Locations within the groundwater trough and along losing stream corridors are also considered as extremely high vulnerability factors.

Potential hazards to groundwater quality were also identified within the Cave Springs recharge area. The major groundwater hazards identified include runoff and spills from highways; sewage conveyance, treatment and disposal facilities; and stormwater detention basins. The vulnerability mapping performed in this assessment helps to ensure that land development BMPs are only applied to necessary areas where they will do the most good in protecting water quality at Cave Springs.



PHASE II STORMWATER REGULATIONS

Over the past decade and a half, the NWARPC has partnered with the University of Arkansas, Division of Agriculture Cooperative Extension Service (UACES) to assist communities, counties and the University of Arkansas in Washington and Benton Counties to meet EPA’s Phase II stormwater regulations. In urbanized areas, stormwater picks up pollutants and flows, untreated, through Municipal Separate Storm Sewer Systems (MS4s), into local creeks, streams and lakes. To prevent harmful pollutants from being washed or dumped into a storm drain system, the U.S. EPA requires that jurisdictions obtain permits to properly manage and discharge stormwater.

In July 2019, the Arkansas Department of Environmental Quality (ADEQ) issued the fourth consecutive five-year MS4 Stormwater General Permit which mandates that each of 20 regulated jurisdictions (Bethel Heights was annexed into Springdale summer 2020) in Northwest Arkansas develop and implement their own stormwater management program to reduce the contamination of stormwater runoff and prohibit illicit discharges. These jurisdictions include: Bella Vista, Benton County, Bentonville, Cave Springs, Centerton, Elkins, Elm Springs, Farmington, Fayetteville, Greenland, Johnson, Little Flock, Lowell, Pea Ridge, Prairie Grove, Rogers, Springdale, Tontitown, University of Arkansas, and Washington County.



Northwest Arkansas MS4 Stormwater Compliance Group

A key role of the NWARPC is coordinating regular meetings of the MS4 Stormwater Compliance Group. Composed of local MS4 representatives, NWARPC staff and the UACES, the group meets regularly to discuss permit compliance challenges, local stormwater education program needs and accomplishments, and regional coordination of stormwater protection efforts. The MS4 Stormwater Compliance Group remains a model for other MS4s in Arkansas. NWARPC continues the work of assisting the Northwest Arkansas MS4s, as well as others, in the development of their stormwater management programs and meeting the EPA Phase II requirements.



Stormwater Coordination Meeting

Regional Stormwater Education Program

The 15-year partnership between NWARPC and UACES created and continues the NWA Urban Stormwater Education Program and is responsible for the educational components that are required through the National Pollutant Discharge Elimination System (NPDES) permit for the MS4 jurisdictions. The goal of the program is to help jurisdictions stay in compliance of permit requirements which are set to maintain local water quality standards. A Stormwater Education Steering Committee meets annually to guide and direct the UACES’s regional urban stormwater education and involvement programs. UACES programming is increasing public awareness and understanding of stormwater runoff, through the development and distribution of print and electronic educational materials, displays, mass media promotion, youth and adult education programs, and public engagement events including creek and lake clean-ups. The regional program also provides shared knowledge and individualized audit support for each jurisdiction. Additional guidance is given to MS4s as unique situations arise to find resources that ensure they are staying compliant with federal and state stormwater regulations. UACES staff provides Quarterly Reports and Annual Reports for the MS4s and conducts annual municipal employee trainings. This regional program has received praise from ADEQ as an innovative and cost-efficient way to help jurisdictions stay compliant.



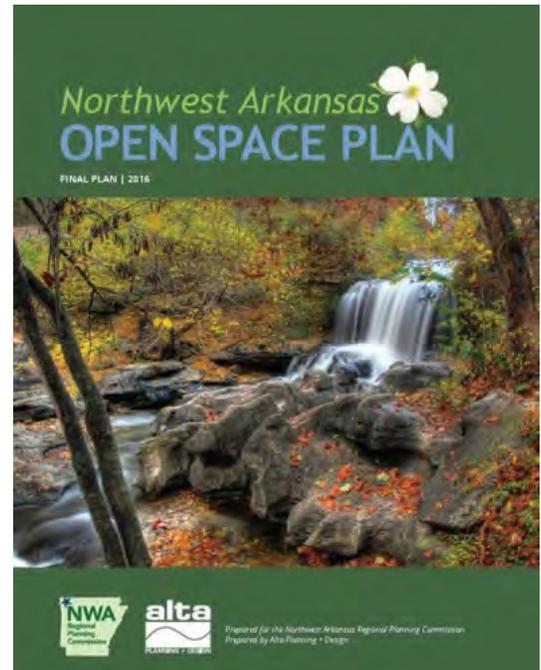
Sample Rain Garden and Drain Art

NORTHWEST ARKANSAS OPEN SPACE PLAN

Northwest Arkansas has abundant open space today, but the rapid growth of the region has already begun to replace forests, prairies, farmland and other valued natural lands with housing, shopping centers, highways, office parks and other forms of development. Without question, people need places to live, work, shop and be entertained. However, people also need places that support outdoor activities, protect water supply from pollution, conserve habitat for native plants and animals, and ensure the quality of life for all residents. People value the beauty and function of their natural lands and waters and open space conservation is important to the region. Since its formation in 1966, the NWARPC has been working toward making Northwest Arkansas a more desirable place to live and work. Open space has been a subject of discussion in Northwest Arkansas for decades, beginning with NWARPC's first open space plan in the 1970s. Since then, many other local and regional studies have focused on open space or included it as a key component.

This new Plan builds upon these previous and ongoing efforts and provide the rationale and strategies necessary to implement Plan recommendations. The Plan was financed through a grant by the Walton Family Foundation to the NWARPC. The work on the Northwest Arkansas Regional Open Space Plan began in late 2014, with the public process to develop the Plan being carried out throughout 2015 and adopted in January 2016.

The Plan identifies the natural landscapes and open spaces that make Northwest Arkansas an attractive place to live, and includes a comprehensive strategy for the conservation of these natural assets. Though focused on conservation, this Plan is consistent with the regional goal of continued growth and development. Landowner participation in conservation programs is welcome and encouraged, but strictly voluntary. To this end, the Plan features a detailed mapping inventory of regional resources, and a 'toolbox' of strategies that landowners, developers, and governments can draw upon to balance regionally important goals of land conservation and development.



OPEN SPACE PLAN SUMMARY

This Plan combines extensive public input and stakeholder involvement with state-of-the-art analysis of the region's natural, cultural, historic, agricultural, and recreation resources. The result is a set of maps and data that show priority areas for conservation throughout the region. The goal is not to protect all priority areas, but rather to work with willing landowners who wish to conserve their land, using the maps as a tool in evaluating potential projects.

A voluntary, regional approach to conservation is recommended, involving only willing landowners, and in coordination with the region's existing conservation organizations.



Gentry Prairie (Photo by Terry Stanfill)

The recommended next steps for this initiative are to continue education and outreach about the benefits of open space and about the needs, goals, and results of this study and additional studies from The Trust for Public Land and other conservation organizations. Recommend documenting the level of financial need for the program from interested landowners and conservation groups, while also gauging public interest in funding the program to fulfill that need. Based on other successful open space programs in the U.S., a dedicated local funding stream is recommended and should continue to be sought after.

The Plan identifies the natural landscapes and open spaces that make Northwest Arkansas an attractive place to live, and includes a comprehensive strategy for the conservation of these natural assets. The Plan was adopted by the NWAPRC on January 27, 2016. The complete Plan and Appendix are a part of the MTP and can be viewed at <http://www.nwarpc.org> or at <http://www.nwaopenspace.com>. In 2017, an ArcGIS on-line map was created so all organization could quickly determine the level of priority based on a GIS model that was created through the Plan development process and can be viewed at <https://www.nwarpc.org/interactive-gis-maps/>.

The Trust for Public Land reviewed the Open Space Plan and at the request of Washington County, completed a Conservation Finance Feasibility Study, which was presented to the Washington County Quorum Court in March 2018. The study analyzed various funding options available for financing land conservation and parks, determined the fiscal capacity and legal requirements of a variety of approaches, and provided demographic information and election history. The funding approach that best matches the needs identified by the Open Space Plan is a general obligation bond.

According to the feasibility study, additional funding through capital improvement bonds backed by a 0.125 percent (1/8th cent) Sales and Use Tax would generate approximately \$4.98 million per year. This revenue could pay the debt service on a \$65 million bond, and enable the County to protect natural resources in today’s dollars.

General obligation debt in Washington County cannot exceed 10 percent of the total assessed value of real and personal property as determined by the last tax assessment. As of December 31, 2016, the legal debt limit for bonded debt in Washington County was \$328,787,387.1 A \$65 million bond would add approximately \$4.78 million to the county’s annual debt service.

A 1/8th cent sales tax increase would bring Washington’s sales tax from 1.25 percent to 1.375 percent. A \$65 million bond, if issued all at once, backed by a 1/8th cent sales tax would cost the typical household \$18 per year, or \$1.50 per month.

In May 2018, The Trust for Public Land commissioned a professionally administered, statistically valid public opinion survey of 400 Washington County likely November 2018 voters. The survey found that a majority of Washington County voters would support a \$65 million bond to conserve land to protect water quality, natural areas, wildlife habitat, and parks.

After hearing an “initial ballot test,” nearly six in ten (59 percent) likely voters indicated they would vote yes. When provided with additional information -- including the annual household cost, and pros and cons of the proposed measure – support increases. After hearing an “informed ballot test,” support for the \$65 million bond goes up by 10 points (69 percent). The bar chart illustrates these results: The \$65 million bond stands a very good chance for successful passage if a well-funded and effective education and outreach campaign informs voters of program’s benefits and structure.

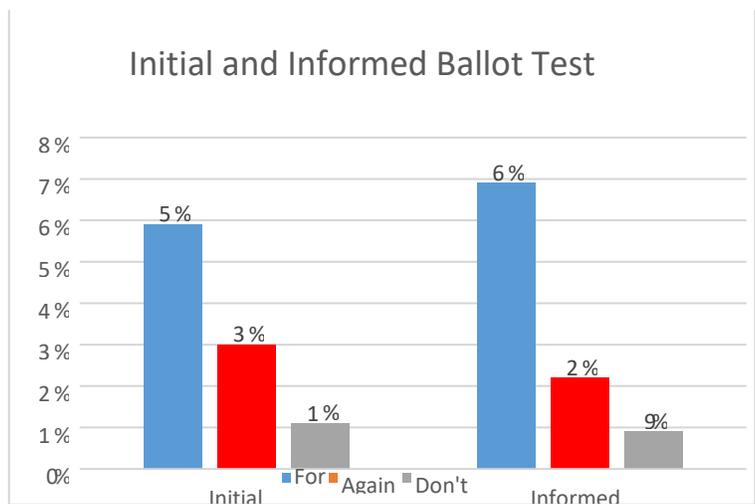


Figure 6.1 Ballot Test Results

The Trust for Public Lands requested that the Washington County Quorum Court direct the County Attorney to work with The Trust for Public Land to draft an ordinance, including ballot language, for consideration by the Quorum Court, and refer a \$65 million General Obligation Bond backed by a 1/8th cent Sales and Use Tax to fund land conservation to the November 6, 2018 ballot. Washington County chose not to continue at the time.

BENEFITS OF OPEN SPACE

Creating Value & Generating Economic Activity

- Proximity to parks and open space enhances the value of residential properties.
- Parks and greenways attract non-resident visitors who put new dollars into local economies.
- Quality parks and scenic landscapes help attract and retain a high quality workforce.

Water Quality Benefits

- Open space provides protective natural buffers to critical water resources, such as Beaver Lake (the primary source of drinking water for Northwest Arkansas), the White River, the Illinois River, and their tributary creeks, streams, and wetlands.
- A 2008 survey of Arkansans found that “Nearly all respondents viewed water as an important issue for Arkansas’ long-term growth and prosperity.”

Natural Wildlife Habitats

- According to the Northwest Arkansas Land Trust, “While some cities are beginning to incorporate connective greenways into their planning process, natural areas are being rapidly consumed in Northwest Arkansas, resulting in the fragmentation of important ecosystems, scenic areas and wildlife habitats.”
- Northwest Arkansas’ karst topography (including caves, springs, and sink holes) supports clean water and native habitats unique to the region. These are areas highly sensitive to pollution and open space helps to protect them.

Recreation, Health and Safety Benefits

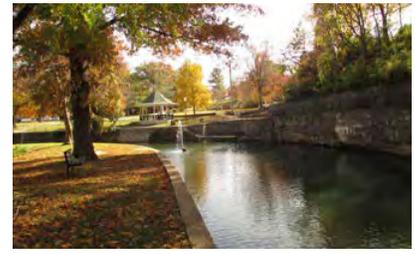
- Recreation areas help to increase physical activity, thereby preventing obesity and reducing chronic medical conditions, not to mention improving mental health and overall quality of life. Parks may also improve public health by increasing social interaction, reducing stress through exposure to nature, and more.
- The protection of natural floodplains along rivers and streams also protects people and property from flood damage.

Historic & Cultural Benefits

- Open space provides context for historic and cultural attractions. The quality of experience for visitors is critical to the success of tourism for such sites, and open space planning can help protect them and buffer them from nearby development.
- Example: Pea Ridge National Military Park is the most intact Civil War battlefield in the United States, and a key goal for management of the park is “preserving the character of the landscape”.

Farmland & Rural Landscapes

- Scenic landscapes, such as family farms, prairies, forested ridgelines and Ozark vistas help define Northwest Arkansas’ very character.
- According to the Northwest Arkansas Council’s 2014 Regional Food Assessment, “The continued viability of agriculture in Northwest Arkansas depends significantly on three interdependent factors: farms remaining economically viable, farmland staying in production (and out of development), and new farmers succeeding retirees”
- Working closely with landowners is a cornerstone of successful open space protection, whether it is a farmer who wants to keep their land in farming, or a property-owner who simply wants their children to recognize the land they grew up on.



BENEFITS OF OPEN SPACE – THE NUMBERS

Beaver Lake and General Watersheds

- \$30.24 million in visitor spending in 2006
 - <http://www.bwdh2o.org/wp-content/uploads/2012/03/2010-FINAL-Beaver-Lake-Watershed-Report.pdf>
- Daily average demand of water from beaver lake is 55 mgd
 - <https://www.bwdh2o.org/about/production-data/>
- Brings in \$4.5 million in revenue from its hydroelectric dam
 - <https://owwbeaverlake.org/beaver-lake/beaver-lake-watershed/>
- “NYC saves about \$7 billion in water treatment infrastructure costs by getting drinking water from protected watersheds.”
 - <http://s3.amazonaws.com/landtrustalliance.org/USFWS-LandTrustAlliance-Economic-Benefits-Brochure.pdf>

Property Value Benefits

- Proximity to protected lands, like National Wildlife Refuges, can increase urban home values by 3-9%. - L. Taylor et al. 2012. Amenity Values of Proximity to National Wildlife Refuges.
- Nearby parks increase value of residential properties and attract tourists who put money into local economies
 - <http://cloud.tpl.org/pubs/ccpe-econvalueparks-rpt.pdf>

Health Care Benefits

- Residents of Jefferson Co, AL saved \$21 million annually in health care due to the urban trail system
 - <http://s3.amazonaws.com/landtrustalliance.org/USFWS-LandTrustAlliance-Economic-Benefits-Brochure.pdf>
- “People who engage in moderate exercise outdoors can save an average of \$1,100 in medical costs annually.”
 - <http://cloud.tpl.org/pubs/ccpe-seattle-park-benefits-report.pdf>

Benefits of Living Near Green Spaces

- “Contact with nature has been linked to a greater ability to cope with life stressors, improved work productivity, reduced job-related frustration, increased self-esteem, enhanced capacity to pay attention, and greater life satisfaction.
 - http://www.nrpa.org/uploadedFiles/nrpa.org/Publications_and_Research/Research/Papers/SOPARC-Report.pdf
- “Having 10 more trees in a city block, on average, improves health perception in ways comparable to an increase in annual personal income of \$10,000 and moving to a neighborhood with \$10,000 higher median income or being 7 years younger. We also find that having 11 more trees in a city block, on average, decreases cardio-metabolic conditions in ways comparable to an increase in annual personal income of \$20,000 and moving to a neighborhood with \$20,000 higher median income or being 1.4 years younger.”
 - <https://www.nature.com/articles/srep11610>

Green Space as Hazard Mitigators And For Stormwater Treatment

- Preserving natural flood mitigators can save an estimated \$1.5 million in potential damage
 - <http://s3.amazonaws.com/landtrustalliance.org/USFWS-LandTrustAlliance-Economic-Benefits-Brochure.pdf>
- In 2016 dollars, trees can give urban communities over \$3.6 million in stormwater benefits annually
 - United States Environmental Protection Agency - Office of Wetlands, Oceans and Watersheds. 2013. *Stormwater to Street Trees: Engineering Urban Forests for Stormwater Management*, Washington, DC
- An acre of protected land can save local communities an average of \$380 in stormwater treatment costs annually
 - <https://www.landtrustalliance.org/topics/economic-benefits/sources-brochure-statistics>

Arkansas Tourism Numbers

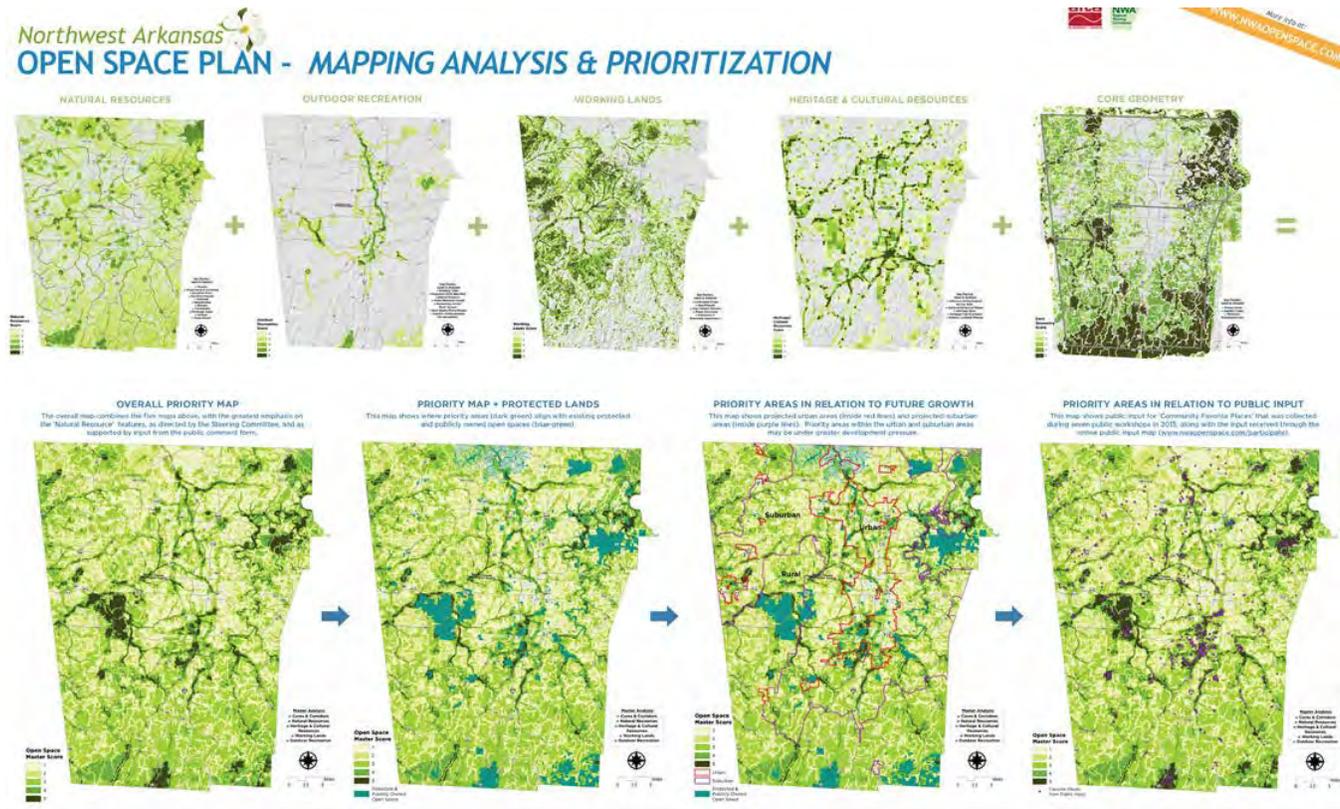
- \$1.8 billion total spent on wildlife-related recreation • \$496 million spent on fishing-related activities • \$1.0 billion spent on hunting-related activities • \$216 million spent on wildlife-watching activities
- Over 28 million dollars revenue generated from state parks
 - https://www.arkansas.com/userfiles/annual_report_2017/2017_annual_report.pdf

HOW PRIORITIES WERE DEVELOPED

As a region, the communities in Northwest Arkansas can be strategic in protecting their most valued natural landscapes and heritage resources as they grow. This Plan identifies such landscapes by combining extensive public input and stakeholder involvement (Chapter 2) with state-of-the-art analysis of the region’s natural, cultural, historic, agricultural, and recreation resources (Chapter 3). The result is a set of maps and data that show priority areas for conservation throughout the region. These main input maps cover:

- Natural Resources
- Outdoor Recreation
- Working Lands
- Heritage & Cultural Resources
- Cores & Corridors

These five resources maps, in the Open Space Plan, were overlaid and combined to create the Overall Open Space Priority Map, with the greatest emphasis on natural resource features, as directed by the Steering Committee.

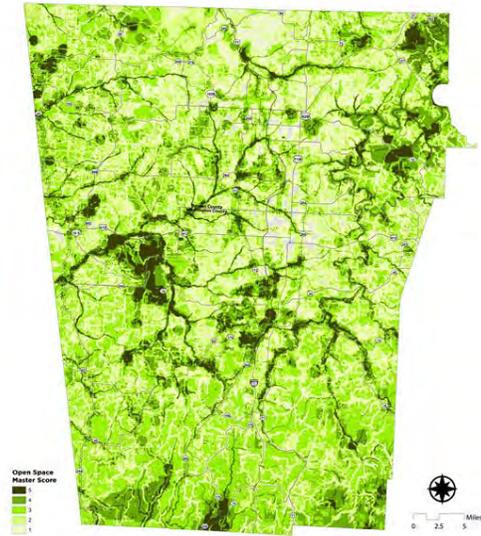


Map 6.3 - Open Space Mapping Analysis and Prioritization

OVERALL PRIORITY OPEN SPACE MAP

Open space resources are shown with a priority range of 1-5, with the higher values shown in darker shades of green. This map should be considered as a starting point for regional discussions about conservation priorities (Map 6.4). The goal is not to protect all priority areas, but rather to work with willing landowners who wish to conserve their land, using the maps as a tool in evaluating potential projects.

All landowners are welcome to submit ideas for land conservation, regardless of the priority ranking on these maps.

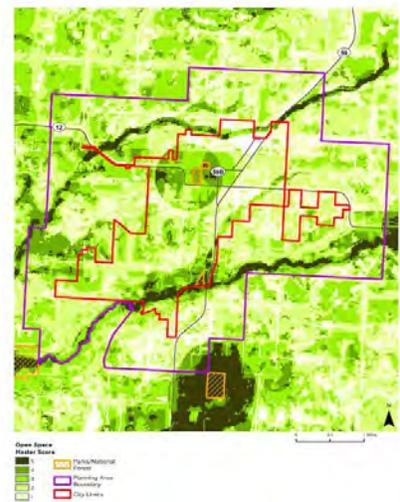


Map 6.4 - Overall Priority Open Space Map

LOCAL COMMUNITY OPEN SPACE PRIORITY MAPS

Community maps for 31 cities have been prepared and included in the Appendix. The Appendix provides a municipal-scale version of the overall priority map for each community in the region. GIS data will be available for creation of local maps for local purposes. The maps should be considered as starting points for local discussions about conservation priorities.

Open space resources are shown on the maps with a priority range of 1-5, with areas that have a higher potential for conservation value shown in darker shades of green. These areas were identified through an extensive analysis of existing conditions throughout the region. Map 6.5 illustrates an example of a community open space priority map.



Map 6.5 – Gentry Community Open Space Priority Map

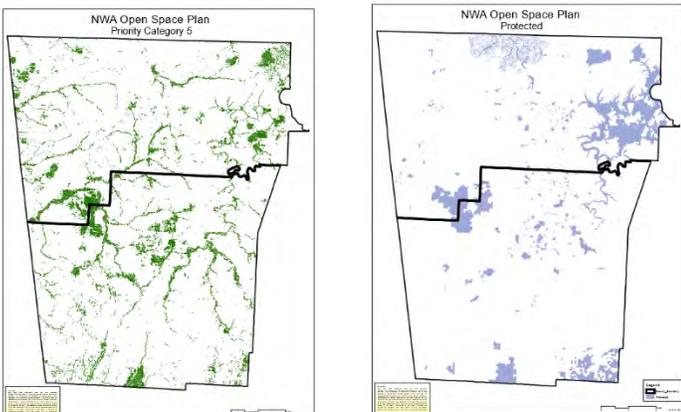
Open Space Priority Map by Acre

The priority map has categories 0-5 with 5 being the highest priority and zero being no data or developed. Here is a table of acres per category for the overall priority map.

Total Acres for Priority Category 2016

Description	Benton	Washington	Combined
Priority 1	125,897	114,908	240,805
Priority 2	147,006	125,795	272,801
Priority 3	135,751	204,148	339,900
Priority 4	88,707	102,340	191,047
Priority 5	47,417	47,700	95,116
No data (Developed)	21,834	14,605	36,439
	566,613	609,495	1,176,108

Table 6.1 – Total Acres by Priority Category



Map 6.6 – Priority Map Category 5 and Protected Open Space

OPEN SPACE PROGRAM CONSERVATION ACCOMPLISHMENTS

Since the adoption of the NWA Open Space Plan in 2016, over 4,000 acres have been conserved by individuals, non-profits, and local and state governments agencies. Multiple properties have been donated, put in conservation easements, or purchased. Here are a few highlights:

- 2017 – Fitzgerald House and Fitzgerald Station Barn, Springdale, AR – 3 Acres - Purchased by non-profit and then donated to City of Springdale - The Fitzgerald farmstead's history dates back to before Arkansas became a state in 1836. An inn and tavern on the property was a way station for stagecoaches, the Trail of Tears and Civil War soldiers. The Springdale barn is one of the few original structures left that was part of the 2,812-mile Butterfield Overland Express. Built using native stone for the walls, the barn's original wood shake roof was destroyed by fire and replaced with a metal one, according to the National Register nomination. A detachment of Cherokee Indians passed by Fitzgerald Station in 1839 as part of an exodus known today as the Trail of Tears. The Butterfield stagecoach ran the route twice weekly. The trip took 25 days, cost \$200 per passenger, and there were 140 stations along the way. Twelve 12 horses were kept on the Fitzgerald property so fresh horses would be ready to replace the animals that had been pulling the stagecoach. The Butterfield Overland Express was a major factor in the settlement and development of Arkansas and the American West before the Civil War, according to The Encyclopedia of Arkansas History & Culture. Now this history is part of a trailhead and the first stop to the Fitzgerald Mountain Bike Park.



- 2018 - Centennial Park at Millsap Mountain, Fayetteville, AR – 220 Acres -The newly created Centennial Park at Millsap Mountain will be a cycling-activated park with state-of-the-art cyclo-cross and mountain biking facilities. Residents will be able to access trail infrastructure unlike any other in the region within an area of preserved greenspace connected to neighborhoods and Fayetteville’s existing 45 miles of shared-used paved trails and 38 miles of natural-surface trails. Purchase of the property from Centennial Bank was made possible by Walton Family Foundation and City of Fayetteville. For project history and current status visit <https://www.fayetteville-ar.gov/3671/Centennial-Park-at-Millsap-Mountain>



- 2018 – Greenland Nature Park, Greenland, AR - a 37-acre nature/river park will be the main attraction. The land (47 acres total) was bought from a private property owner by the City of Greenland with some of the park funding has come from Arkansas Game and Fish, Arkansas Parks and Tourism and Beaver Water District, to name a few agencies. The project will be a work in progress for a few years but will include quail and wild turkey habitat, walking and running trails, and it’s one mile from the school and on the catalyst trail project route. The location used to be a salvage yard that had to be remediated.



There were many additional Open Space wins (acres):

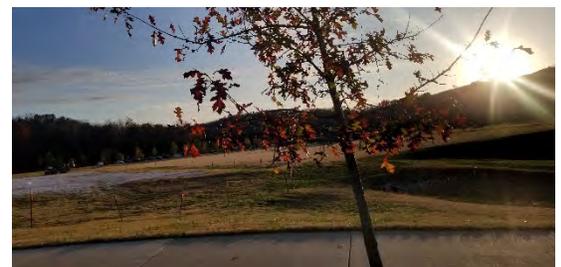
- Conservation Fund – Pea Ridge Wilson Property (12)
- Arkansas Natural Heritage Commission – Searles Prairie (2)
- City of Lowell – Kathleen Johnson Memorial Park Land – (100)
- NWA Trailblazers – Coler Mountain Bike Park
- Arkansas Game and Fish Commission Education Center (80)
- Nature Conservancy (40) 001-04761-000 •
- Arkansas Natural Heritage Commission and Arkansas Game and Fish Commission – NE of Devils Eyebrow (68)
- Northwest Arkansas Land Trust - (270)
- City of Gentry – Property next to school (15)
- City of Fayetteville –Dead Horse Mountain Open Space (96)
- NWA Trailblazers - Kessler Mountain - (65)
- City of Rogers – Pinnacle Open Space Project (24)
- Ozark Off-Road Cyclists – Kessler Mountain - (40)
- City of Prairie Grove – 7 Acres of Muddy Fork
- Arkansas Natural Heritage Commission and Arkansas Game and Fish Commission (128)
- Arkansas Game and Fish Commission (50)
- The Nature Conservancy (463)
- Walton Family Foundation (72)
- City of Gentry - (11 acres)
- Arkansas Natural Heritage Commission - Devils Eyebrow (120) (36)
- City of Fayetteville –
 - (2) BelClaire HomeOwners Assoc 765-28459-000
 - (3) Cliffs III 765-14287-000
 - (3) Pace Ind 765-14622-005
 - (3) Hughmount Village 256-00129-000
 - (4) CMN Bus Park Ph II 765-22075-000
 - (4) Timber Trails Tree Pres Area 765-26318-000
 - (4) Cobb&Westville 765-22969-000
 - (4) Rochier Heights Add
 - (6) Nelms LLLP
 - (7) Reserve at Steele Crossing
 - (9) 765-19958-000
 - (16.42) 765-15415-000



Pea Ridge Wilson Property by Tom McClure



Coler Park



Kessler Mountain



Searle's Prairie by Tom McClure

RECOMMENDATIONS

Compelling Vision

This Plan defines a compelling vision for open space conservation. The benefits of open space are clearly articulated in this Plan. Open space protects the water we drink, the air we breathe, and the landscapes we call home. Open space is important to everyone in Northwest Arkansas, as it shapes the lives and wellbeing of the people that reside in the region.

Leadership

Based on work in other communities in the U.S., project consultants recommended that the managing entity should be a group that has

- Public trust and a proven record of success
- Regional representation through an existing operating framework
- The ability to update and manage Geographic Information Systems (GIS) mapping
- An understanding of open space concepts
- An understanding of the regional political landscape

Given these parameters, the NWARPC is the most appropriate organization, and leadership entity, to guide the implementation of this Open Space Plan. An Open Space Committee can be established by the NWARPC. Committee membership number should be approximately 15 to 20 persons. Under the above proposal, the ultimate authority and decision maker for the implementation of the Open Space Plan would be the leadership (members) of the NWARPC. NWARPC staff and the Open Space Committee would provide technical support and advice to NWARPC. The NWARPC should adopt an annual work plan, at the beginning of each fiscal year that outlines the goals and objectives of the Northwest Arkansas Open Space program. This should include an annual budget that supports the actions and activities of the Program.

RECOMMENDED PROGRAM FRAMEWORK

As noted at the outset of this planning process, the purpose of this Plan is to develop a coordinated, voluntary program to protect and promote the region's most valued natural landscapes and open spaces. The goal of the program is to create opportunities for landowners, organizations, and local governments to have a place to go to nominate projects for conservation, and to provide a strategy for how those nominations are addressed.

Selecting Projects

This Plan's prioritization maps serve as a guide only. They show prioritized tracts of land throughout the region based on technical data. Rather than generating a listing of project based on mapping, the selection of projects should instead be based on a community-driven approach that uses the mapping as a starting point and a tool for analysis.

The size of the Open Space Committee can be established by the NWARPC with input from NWARPC staff. It is recommended that the Committee membership number approximately 15 to 20 persons.

The selection of projects should be based on a community-driven approach that uses the mapping as a starting point and a tool for analysis. Communities, organizations, and individual landowners will decide what they consider as priorities to submit as part of the program. Potential projects will be nominated to the open space committee through a periodic call for proposals. Nominations would come from individual land owners, non-profits, community groups, businesses, and municipalities.

Technical evaluation: How well does the project align with the priority mapping analysis? Community-driven evaluation: How well does the project compare given other key factors?

NWA Open Space Committee – (2016-2018)

NWA Open Space Committee was setup in 2016. The Committee met monthly March 2016 to December 2018. The Committee setup 4 Subcommittees to address the recommendations in the Plan:

- Framework – Create application, selection criteria/ranking, letters, handouts, promotional materials, type of agreements options (conservation easements, contracts, moa), list of organizations partner organizations that will accept properties, list of grant organizations
- Outreach and Education – create handouts, video, presentations, flyers, posters, develop a message and dissemination, general public outreach, present to Civic Groups (landowners, local org, schools, community leaders, and others interested parties), social media posts, coordinate/incorporate with other existing city/county plans, reach out to community regarding toolbox (city planners, developers, residents, etc), promote Best Management Practices
- Funding – funding for projects selected projects and maintenance until sustainable funding is obtained, obtain sustainable funding, review/research all options available for AR Counties/cities/RMA(taxes, bonds, real estate transfer fee, driver’s license, impact fees, etc), research political will, review options for taxing authority being established, reviewed organizations with expertise in Open Space Funding - Trust for Public Lands, complete feasibility study, complete public opinion survey, ballot measure development, present information to taxing entity for consideration
- Priority Properties – Create priority selection per category (nat res, recreation, cultural, core, working lands) and overall, contact each city/county/conservation organization with what their priorities are, used toolbox to conserve properties, maintain priorities maps and GIS data, find and conserve properties, maintain GIS data and map.

NWA Open Space Collaborative (2019 to present)

The NWA Open Space Committee continued to meet March 2016 to December 2018. In December, the Open Space Committee recommended that there be a collaborative effort among individuals and organizations going forward with the NWA Land Trust leading the way, with continuing involvement and support from NWARPC. The RPC/Policy Committee approved the recommendation at their December 5, 2018 meeting. The Collaborative continues to meet and implement the Open Space Plan.

PRIORITY ACTIVITIES AND PHASING

Upon adoption of this Open Space Plan, a variety of work activities will need to be undertaken by the NWARPC, NWARPC staff, project partners and the Open Space Committee. These activities are described in greater detail as:

PHASE ONE PROGRAM (2016)

- Education and Outreach
- Maintain Official Open Space map
- Land Conservation

PHASE TWO PROGRAM (2017-2018)

- Open Space Funding
- Education and Outreach
- Land Conservation

PHASE THREE PROGRAM (2019 AND BEYOND)

- Land Conservation
- Conservation Toolbox 25 ways to conserve. Examples include: fee simple acquisition, donation, conservation easement, right of first refusal, donation via bequest, intergovernmental partnership, etc.

FUNDING THE OPEN SPACE PROGRAM

Every successful open space program in the United States shares one common trait – a local source of funding that is used to match and leverage other funding in support of open space conservation. A regional sales tax is a recommended funding method. Other local opportunities may include: city sales tax, bond referendum, or project-by-project basis.

Trust for Public Land Partnership

In 2017, a partnership was formed with the Trust for Public Lands to examine a plan for a funding the NWA Open Space Plan. The Trust for Public Lands laid out a Plan for the Committee with stepping off points if data or political will changed the progression.

The first step was to have a Feasibility Study completed for Benton and Washington Counties. This included assistance from the Counties to request the studies.

Ballot Measure Components Key Steps for Successful Ballot Measures



Figure 6.2 Ballot Measure Components

Feasibility Studies

Conservation Feasibility Study for Benton and Washington Counties was completed that showed the most viable finance mechanisms for open space preservation were capital improvement bonds, sales tax, and property tax. completed NWA Open Space Plan, with recommendations, options, and alternatives was given to the appropriate decision-makers at the county level, their decision was not to move forward at this time on a dedicated funding source for open space preservation.



Trust for Public Land Public Opinion Survey - Washington County – May 14-16, 2018

The Trust for Public Land commissioned John Wilson Research to complete a statistically valid survey of Washington County voters regarding their support for a bond referendum to fund land conservation and parks. The random sample was drawn from registered voters throughout the county who had voted in the 2016 general election, or registered to vote in the county since the last presidential election. The sample is also demographically representative of the profile of likely November 2018 voters. Interviews were distributed proportionally throughout the county. The survey was conducted May 14-16, 2018 on both landline and cell phones (50 percent), and has an overall margin of error of +4.9%. Sampling error for subgroups within the sample will be larger.

Voter Intentions

Nearly six in ten likely voters indicate that they would vote Yes if the election were being held today for a ballot measure that would fund land conservation through a \$65 million general obligation bond backed by a 1/8-cent sales tax. Respondents were presented with the following language of the proposal as it would appear on a future ballot:

“CONSERVATION AND RECREATION BONDS

Vote for or against the issuance of bonds in Washington County in the maximum aggregate principal amount of \$65,000,000 for the purpose of financing land conservation and improvements in all areas of Washington County to protect the water quality of rivers, lakes, and streams, natural areas, fish and wildlife habitat, farmland, parks, recreational areas, trails, and wetlands; and, to pay the bonds, the levy and pledge of a new 0.125% (one-eighth percent) local sales and use tax within the County that will expire after the bonds have been paid?”

Given this language, a large majority of Washington County voters (59 percent) indicate they will vote Yes, with 36 percent of the electorate indicating they will “definitely” vote Yes. 30 percent indicate opposition at this time and 11 percent are undecided.

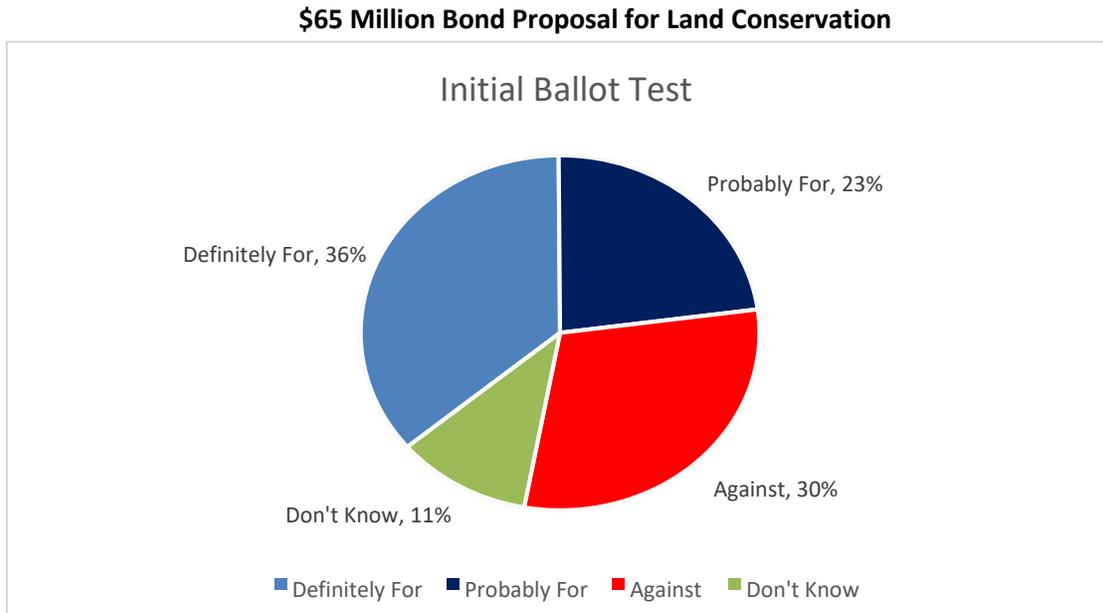


Figure 6.3 Ballot Test Results

- When provided with information about the tax impact of the proposal, support for the proposal increases.** Survey respondents were informed that bond referendum would cost the average household in Washington County an additional \$18 per year. When provided with this information about cost, support increased with 64 percent of Washington County voters indicating they will vote Yes and 41 percent of the electorate indicating they will “definitely” vote Yes. 31 percent indicate opposition after hearing the cost information and 6 percent are undecided.
- After hearing more about the proposal, support increases significantly with 69 percent indicating that if the election were held today they would vote Yes for the \$65 million bond for land conservation.** In the survey, we simulated some of the give and take that could occur over the course of a campaign so that respondents heard a series of statements in support of and opposed to the proposal. After hearing all of the information over the course of the survey, fully 69 percent indicate they would vote Yes, with 37 percent saying they would definitely vote Yes. Just 22 percent oppose the proposal.

Uses for Funds

Voters respond very positively to all of the specific uses for the funds for conservation and recreation, with an emphasis on water, including protecting drinking water sources and protecting the water quality of rivers, lakes, and streams. The survey also reveals that voters approve of the ways in which funds from such a measure could be used. A minimum of three of every four voters approved of each of the conservation and recreation uses tested. Those uses for funds receiving the highest level of support are as follows.

Feature	% Strongly Approve	% Total Approve
To protect drinking water sources.*	81%	93%
To protect Beaver lake, the drinking water source for Washington County.*	80%	91%
To the water quality of rivers, lakes, and streams.	75%	90%
To preserve fish and wildlife habitat.	67%	87%
To protect natural areas.*	64%	88%
To protect working farms.	64%	86%
To alleviate traffic congestion in high growth areas.	64%	84%

Table 6.2 Uses for Funds

Accountability Provisions

A few common sense accountability provisions also increase voter confidence in the proposal. We tested a range of accountability provisions in order to assess the impact they have on voters’ willingness to support the \$65 million bond proposal. The strongest provisions are as follows.

- The bond referendum language spells out in detail what the funds can be used for and the funds can only be used for those purposes. (76% more likely to vote Yes, 54% much more likely to vote Yes)*
- There will be full public disclosure of all project spending. (74% more likely to vote Yes, 54% much more likely to vote Yes)*
- There will be an annual independent audit of how the funds are spent. (72% more likely to vote Yes, 48% much more likely to vote Yes)

Conclusion

In sum, the polling shows good prospects for the passage of a \$65 million land conservation bond in Washington County in the November (2018) election. Voters offer strong support initially and that support grows as voters learn more about the measure. Given a good campaign to communicate the measure’s benefits to voters, it is well positioned for success at the ballot in November (2018).

Trust for Public Lands Recommendation – Washington County

Based upon feasibility research and a recent public opinion survey of 400 likely voters in Washington County conducted by the Trust for Public Land,² we recommend that the Washington County Quorum Court place a conservation finance ballot measure on the ballot this November with the following provisions:

Funding mechanism, duration, and amount: A 20-year \$65 million General Obligation Bond backed by a 0.125% (1/8th cent) Sales and Use Tax.

Purposes: Protect drinking water sources, including Beaver Lake; the water quality of rivers, lakes, and streams; natural areas; fish and wildlife habitat; wetlands; working farms; historic, heritage and cultural sites; parks, recreational areas, and recreational trails for walking, running, and bicycling.

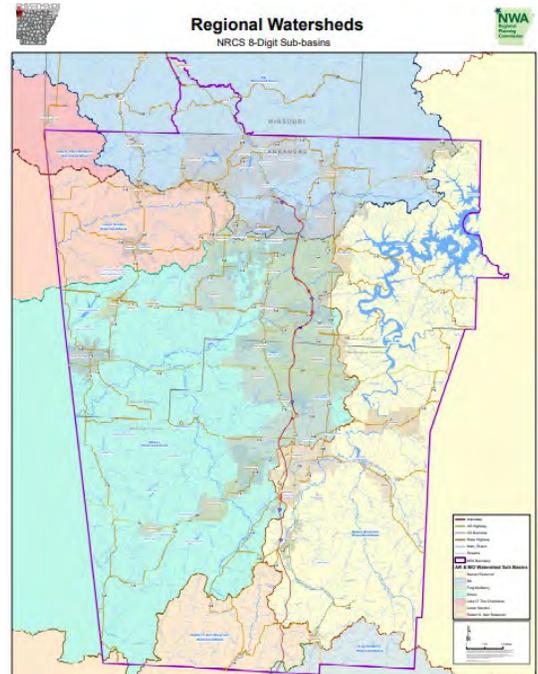
Accountability: An annual independent audit of spending with full public disclosure of all spending. Land will only be purchased from willing sellers on a voluntary basis.

Election timing: November 6, 2018, general election.

Watersheds

A **watershed** is an area of land that drains all the streams and rainfall to a common outlet such as the outflow of a reservoir, mouth of a bay, or any point along a stream channel. There are 7 watersheds in the NARTS planning area. Each watershed has significant importance whether it provides the drinking water for 1 of 6 people in the state like the Beaver impacts in the area it services.

Section 303(d) of the Clean Water Act (CWA) requires states to identify waters that do not meet or are not expected to meet applicable water quality standards. These waterbodies are compiled in even numbered years into a document known as the List of Impaired Waterbodies prepared pursuant to Sections 305(b) and 303(d) of the Federal Water Pollution Control Act. The regulation (40 CFR 130.7) requires that each 303(d) list be prioritized and identify waters targeted for TMDL development. The 2020 List of Impaired Waterbodies can be accessed at www.adeg.state.ar.us/water/planning/integrated/303d/list.aspx. NWA has multiple waterbodies on this list. Additionally, there are Ecologically Sensitive Waters and Extraordinary Resource Waters located in NWA that the State.



Map 6.7 - Watersheds

Figure IV-1: Arkansas's Waterbodies with Completed TMDLs (Categories 4a and 1b)

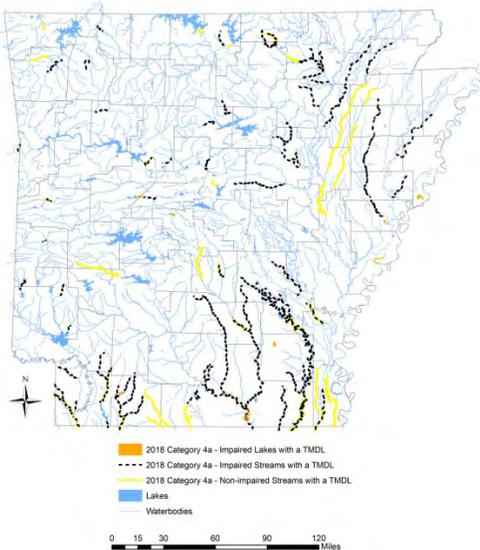
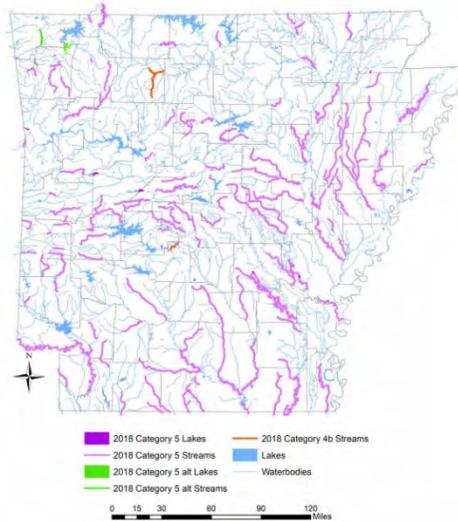


Figure IV-2: Arkansas's Impaired Waterbodies without Completed TMDLs (Category 5, 5-alt, and 4b)



Map 6.8 – Impaired Waterbodies

Significant Publicly-owned Lakes – Primary Purpose

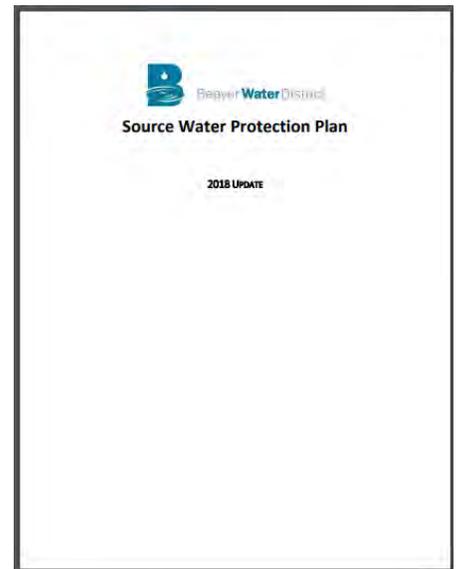
- 15 Crystal Angling (Public Fishing)
- 30 SWEPCO Water Supply
- 11 Beaver Hydropower
- 21 Elmdale Angling (Public Fishing)
- 22 Fayetteville Recreation
- 29 Sequoyah Recreation
- 19 Wedington Recreation
- 23 Bobb Kidd Angling (Public Fishing)

<https://www.adeg.state.ar.us/water/planning/integrated/303d/pdfs/2018/final-2018-305b-report.pdf>

Beaver Water District (BWD)

More than 70 years ago, visionary community leaders got together to discuss the need for a long-term supply of clean, safe water for Northwest Arkansas. With an eye to the future and knowledge that a large lake was the best source of water, these citizens worked to establish Beaver Lake Reservoir. The dam that created Beaver Reservoir and the first water treatment plant (constructed by the City of Springdale) were completed in the mid-1960s. Since that time, Beaver Water District (BWD) has expanded facilities and improved to keep up with increased water demand and stricter drinking water standards. BWD is a Regional Water Distribution District enabled by Arkansas Act 114 of 1957.

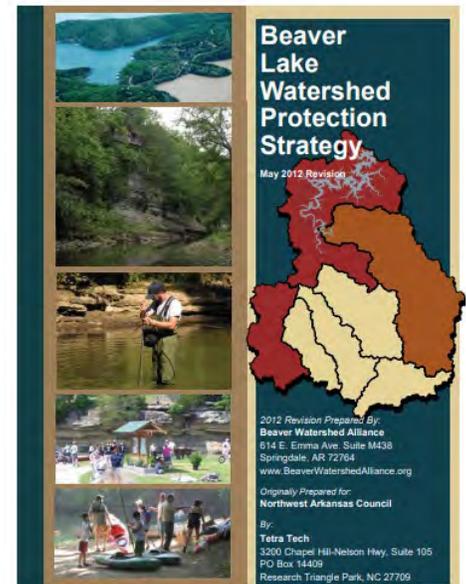
BWD's mission is to serve our customers' needs by providing high quality drinking water that meets or exceeds all regulatory requirements and is economically priced consistent with our quality standards. BWD supplies clean, safe drinking water, sourced from Beaver Lake, at the wholesale price of \$1.38 per thousand gallons to four customers -- Fayetteville, Springdale, Rogers, and Bentonville. These cities in Northwest Arkansas then pump, store, distribute and resell the water to more than 350,000 people and industries in their cities and surrounding areas. On April 21, 2016, BWD's Board of Directors approved a motion to dedicate \$0.04 cents per 1000 gallons sold to the Source Water Protection Fund. In 2018, Beaver Water District staff completed an update of the 2012 Plan.



Beaver Watershed Alliance (BWA)

The Beaver Watershed Alliance was formed in 2011 to establish programming to maintain high quality drinking water in Beaver Lake and improve water quality in the Beaver Lake Watershed. The Alliance represents a diverse stakeholder group from conservation, education, water utilities, technical and science, business, agriculture, recreation, and local government groups working together for the cause of clean water.

The Beaver Watershed Alliance (BWA) works to proactively protect, enhance, and sustain the high water quality of Beaver Lake and its tributaries through voluntary best management practice implementation, outreach and education, and scientific evaluation. Tributaries of Beaver Lake such as the West, Middle, and East Forks of the White River, Richland Creek, and War Eagle Creek offer a diverse and stunning variety of aesthetic beauty, wildlife, and cultural heritage as they flow along their course to Beaver Lake. From Harrison, Arkansas to Westville, Oklahoma, over 420,000 people rely on Beaver Lake for drinking water, industry, and recreational activities such as boating, skiing, birding, and swimming. BWA provides strategic, valued, and meaningful programming to provide watershed landowners and environmental stewards with the resources they need to help protect the water quality of Beaver Lake and its tributaries. In addition to working with landowners and on innovative solutions to our regions water quality issues, BWA also plans fun and informational volunteer events to keep the lake and rivers clean! Planting native trees, shrubs, grasses, and wildflowers at stream restoration sites and upland areas of the watershed helps teach participants about the issues affecting Beaver Lake and gets them involved in actively stewarding the precious resource. Everyone can make a difference in the water quality in Northwest Arkansas, and BWA is proud to equip people with the tools needed to achieve just that.



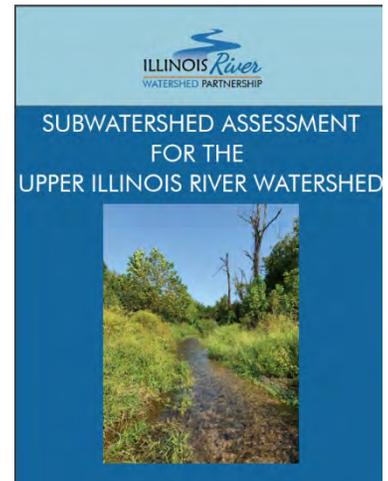
To learn more about the technical aspects to protecting Beaver Lake and its tributaries, check out the Beaver Lake Watershed Protection Strategy. <https://www.beaverwatershedalliance.org/>

THE ILLINOIS RIVER WATERSHED PARTNERSHIP (IRWP)

In 2005, IRWP was founded on the belief that neighbors could work together to improve water quality without further government regulation. The board is made up of representatives from agriculture, business, construction, education, and conservation. Illinois River Watershed Partnership works to improve the integrity of the Illinois River Watershed through public education, outreach, and implementation of conservation and restoration practices throughout the watershed. The

vision of the IRWP is that the Illinois Rivers and its tributaries will be a fully functioning ecosystem, where ecological protection, conservation, and economically productive uses support diverse aquatic and riparian communities, meet all state and federal water quality standards, promote economic sustainability, and provide recreational opportunities.

IRWP owns and operates the Illinois River Watershed Sanctuary and Learning Center a 30-acre Watershed Sanctuary that is open for hiking, fishing, canoeing, and kayaking from dawn to dusk everyday. Bat viewing March through October at dusk. Assessments were conducted on the following priority subwatersheds from 2018-2019: Moore’s Creek (located near Lincoln), Sager Creek (located in Siloam Springs), Lower Muddy Fork (located near Prairie Grove), and Clear Creek (located near Fayetteville). Each assessment consisted of collecting and identifying macroinvertebrate communities and stream characteristics. All four subwatersheds are considered high priority for sediment, total nitrogen, and total phosphorus in Arkansas Natural Resource Commission’s (ANRC) 2011-2016 NPS (Nonpoint Source Pollution) Management Plan



In 2019, IRWP began outreach and implementation of our new Riparian Restoration Program. With the help of a generous \$2.8 million grant from the Walton Family Foundation and Arkansas Natural Resources Division, IRWP is working to restore 20 miles of riparian corridor by the end of 2023. We are serving landowners in five priority subwatersheds that are currently classified as impaired for their designated use: Sager Creek, Lower Muddy Fork, Moore’s Creek, Clear Creek, and Lake Wedington to the Illinois River Watershed. In 2020, IRWP created a free in-school or creekside mobile lab that moves our water quality focused educational/interactive activities out into the watershed.

Multi-Basin Regional Water Council

One organization that is working in multiple watersheds in four states including Arkansas and Missouri to bring needed cooperation among stakeholders is the Multi-Basin Regional Water Council. The Multi-Basin Regional Water Council is a not-for-profit organization that was formed in 2009 whose purpose is to educate its members and the public on environmental issues and other such issues as water quality, water conservation, watershed management, and to increase the capacity of member organizations to cooperate and to fulfill their own mission. The four states represented in the council are Missouri, Arkansas, Oklahoma and Kansas. The Multi-Basin Water Council meets quarterly and is increasing its ability to foster communication among members, governmental agencies, political subdivisions and non-governmental organizations.

Water Conservation Resource Center (WCRC)

WCRC is a Non-profit Organization that strives to protect, conserve and restore natural resources by utilizing the watershed approach, environmental outreach and providing planning and technical assistance to landowners, communities and government. The organization was formed in 2006 Sandi J. Formica and Mathew Van Eps, P.E. formed the WCRC, a 501(c)(3) nonprofit organization; committed to making a difference through conservation and restoration. WCRC recognizes that safe-guarding our Nation’s natural resources and protecting water quality requires the will of well-organized individuals, strategic funding mechanisms, and broad community support.

WCRC has completed many conservation and restoration projects in Northwest Arkansas. The WCRC continues to monitor, evaluate, and maintain all of the sites. Implementation of the projects has resulted in the reduction of sediment and phosphorus loadings in the Beaver Lake and Illinois River watersheds. The stream restoration projects have protected city parks, utility infrastructure, a historic cemetery, and private property during high flow events



Mullins Branch at the University of Arkansas

WCRC has created a mitigation bank. The West Fork White River(WFWR) mitigation bank was constructed in the summer of 2015. The project is located west of Dead Horse Mountain Road in southeast Fayetteville, Arkansas. The mitigation bank provides both stream and wetland mitigation credits to United States Corps of Engineers permittees whose project create unavoidable impacts to waters of the United States.

LAND TRUSTS

A land trust is essentially a private agreement, whereby one party, the trustee, agrees to hold title to property for the benefit of another party or parties, the beneficiary(ies). The creator of the trust is often called the settlor or trustor. There are two land trusts that operate in the MPO area Ozark Land Trust and Northwest Arkansas Land Trust. Both work with conservation-minded landowners, municipalities and partner organizations to protect land with agricultural, ecological, scenic, historic and recreational significance in Northwest Arkansas. The NWALT is an accredited land trust, the only one in the state and in the region. The two land trusts work to obtain conservation easements, fee-simple purchases or donations of land, and land management and stewardship.

Ozark Land Trust (OLT) <https://ozarklandtrust.org/>

The Ozark Land Trust is a not for profit organization whose mission is to help landowners preserve and protect the nature, history, and heritage of the Ozarks forever. With Missouri, Arkansas, Kansas, and Oklahoma land trusts, OLT has more than 28,000 acres protected from urban development and subdivision. The way this is achieved is through various methods that include conservation easements, nature preserves, and partnerships with conservation organizations

Northwest Arkansas Land Trust (NWALT) <https://www.nwalandtrust.org/>

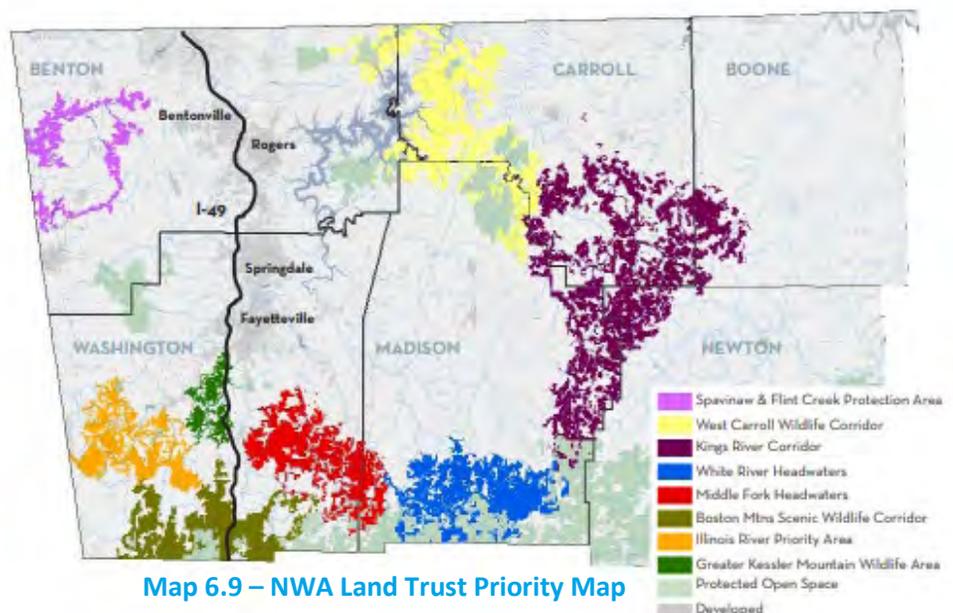
Founded in 2003, NWALT is a non-governmental, nonprofit 501(c)(3) conservation organization dedicated to forever protecting the special places and landscapes that define our region. The mission of the Northwest Arkansas Land Trust is to preserve and enhance the quality of life in Northwest Arkansas through the permanent protection of land. The service area of the Northwest Arkansas Land Trust includes the greater Northwest Arkansas Region, with a core focus on Benton and Washington counties, where development pressure drives the greatest need for land conservation. The vision and promise of the Northwest Arkansas Land Trust is to work collaboratively and tirelessly to ensure that our region’s abundant scenic beauty, clean air, clean water, wildlife habitat, outdoor recreation opportunities, local food supply and natural heritage are permanently protected for the benefit and prosperity of current and future generations.

NWALT Strategic Plan 2020

After months of research, data analysis, and collaboration, we are excited to roll out our new Strategic Land Protection Plan. Many hours were spent establishing these highest priority areas that, if kept natural, will do the very most for preserving clean water, protecting wildlife habitat corridors, and creating a more climate-resilient future for our developing NWA region. This Plan is designed to provide the land trust with a strategic, science-driven, landscape-scale focus for our work that complements the work and priorities of our partners while providing the region’s first wildlife corridor and climate-forward conservation plan.



Eight different priority regions have been identified in the plan. Though these areas have distinct characteristics, each of the identified landscapes serve as an important piece of the greater whole. The priority areas complement each other, expanding existing protected habitat anchors and connecting undeveloped, resilient lands in our region. They also provide vital links to important habitat areas throughout Arkansas and into surrounding states.



Map 6.9 – NWA Land Trust Priority Map

Clean Energy and New Technology

Emerging trends, new technologies and new innovations are bringing a major transformation to transportation, which is being dominated by vehicle electrification, autonomous vehicles, micro-mobility, shared mobility, and drones. According to the EPA, transportation was responsible for 28.5% of U.S. greenhouse gas emissions in 2016, representing the largest share of greenhouse gas emissions in the nation. Over 90 % of the fuels used in transportation are petroleum based, mainly gasoline and diesel being burned in internal combustion engines. Electric Vehicles (EVs) are widely seen to curb these impacts by shifting away from the use of fossil fuels in motor vehicles to those that will be less impactful. Energy efficiencies and pollution control are on the minds of many planners in NWA.

A presidential executive order was signed on January 27, 2021 to develop plans to convert all federal, state, local and tribal fleets to "clean and zero-emission vehicles." Auto manufacturers are planning to build more electric vehicles, General Motors announces to produce all electric vehicles by 2035 for certain lines.

Advancements in NWA include:

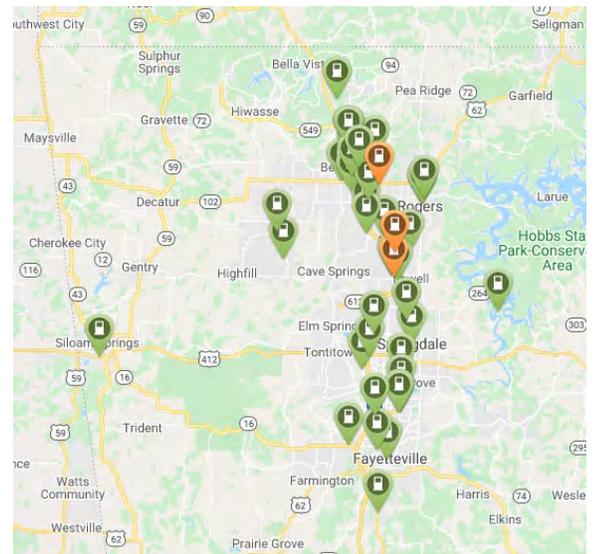
- City of Fayetteville adopted an [Energy Action Plan](#) in January in 2018 that expresses a goal of reducing Greenhouse Gas Emissions (GHG) for critical activities occurring in Fayetteville. The plan outlines strategies, goals and actions in the critical activities of transportation, energy, buildings and waste. The Plan states that transportation activities account for 27% of Fayetteville’s Green House Gas emissions between the 2010 and 2016 inventory years. The Plan includes goals of 1)Reduce total housing and transportation costs to 45% of area median income 2)Reduce per capita vehicle miles traveled to 2010 levels by 2030 and 3)Achieve 25% bike/walk/transit mode share by 2030.
- City of Fayetteville’s bike share program offers e-bikes as part of the program in 2018.
- Walmart announced the rollout of electric car charging stations across Arkansas beginning in 2019.
- City of Fayetteville added Spin company as the scooter share program with 250 scooters in 2020.
- City of Pea Ridge approved Walmart drone delivery hub and Zipline International to do trial testing from Neighborhood Market to select people in the area according to dronelife.com in 2021.
- Walmart and Gatik finish a pilot program and are now implementing driverless autonomous vehicles in 2021.
- City of Fayetteville adopted standards for businesses installing electric vehicle charging stations. The city plans to start setting up chargers at public parking spaces in City lots and parking decks in 2021 and 2022.

US DOT Beyond Traffic 2045 Report

According to the US DOT Beyond Traffic 2045 report, the transportation sector is making major strides: with new fuels, new vehicles, and new policies that help to reduce emissions. New types of fuels promise to dramatically reduce emissions for automobiles, trains, planes, and vessels are emerging, sales of plug-in electric and hybrid vehicles are increasing, and the fuel efficiency of new vehicles is improving. The federal government issued joint fuel economy and greenhouse gas emissions standards for cars and light trucks, and fuel economy standards were set for medium and heavy trucks for the first time ever. These regulations are expected to increase the fuel efficiency of vehicles by approximately 50 percent over the next decade.

Future Planning

Local government and businesses should continue to identify priority locations to deploy technologies to best meet the region’s specific needs through advance planning, pilot projects, and infrastructure investments.



Map 6.10 – PlugShare.com EV Charging Stations



CHAPTER 7. TRAVEL PATTERNS AND TRAVEL FORECASTING

TRAVEL PATTERNS

Northwest Arkansas has experienced unprecedented growth in population and employment in the past 25 years. The economic vitality and diversity of population have been strong catalysts for the growth of the region.

In Northwest Arkansas, the majority of the population uses an automobile for work related trips. According to the American Community Survey (ACS) 5-year estimate of 2019, the vast majority, over 90 percent of workers 16 years and over, in Benton and Washington Counties in Arkansas and McDonald County in Missouri, commuted to work by car, truck, or van.

Figure 7.1 and Figure 7.2 illustrate the percentages for each mode of transportation that workers 16 years and over used to commute to work for two five-year estimates (2009-2013 and 2015-2019). In Benton County, the percent of workers who drove alone increased from 82.4 percent in 2013 to 84.9 percent in 2019. In Washington County this group increased from 76.8 percent in 2013 to 78.6 in 2019. McDonald County experienced an increase from 78.6 to 79.5 percent. For the public transportation mode, in Washington County which decreased from 1 percent to 0.7 percent by 2019. In the same category, Benton and McDonald County percent stayed at 0.1 percent.

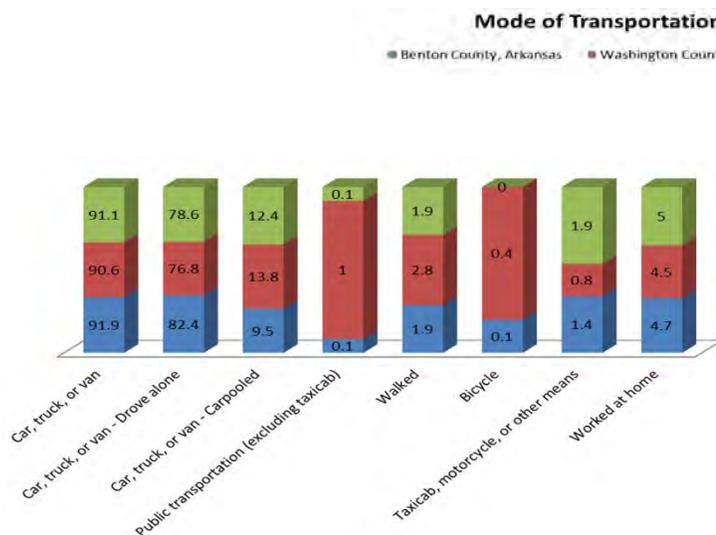


Figure 7.1 - Mode of Transportation to Work (percent) ACS 2009-2013

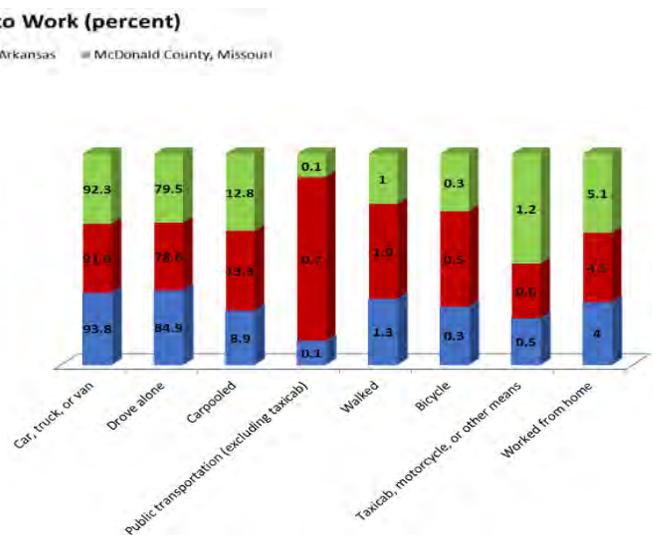


Figure 7.2 - Mode of Transportation to Work (percent) ACS 2015-2019

In terms of travel time, the ACS data collected between 2009-2013 and 2015-2019 illustrates the following percent by travel time in minutes and patterns by county:

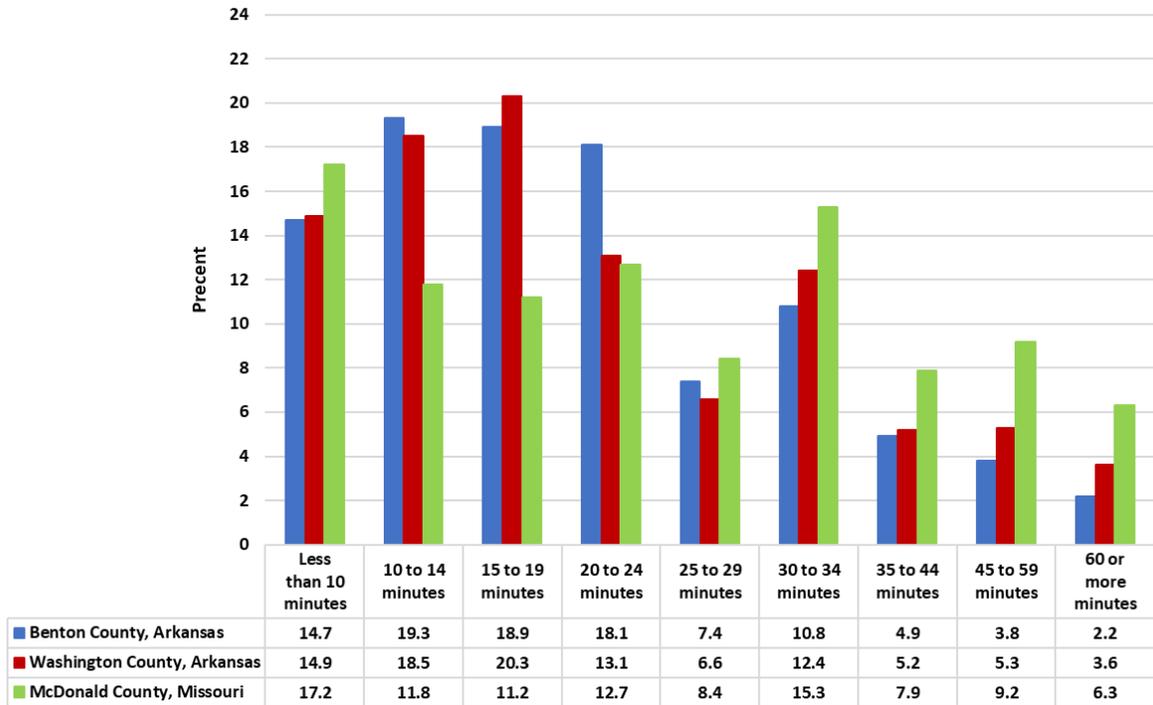


Figure 7.3 - Travel Time Estimate ACS 2009-2013

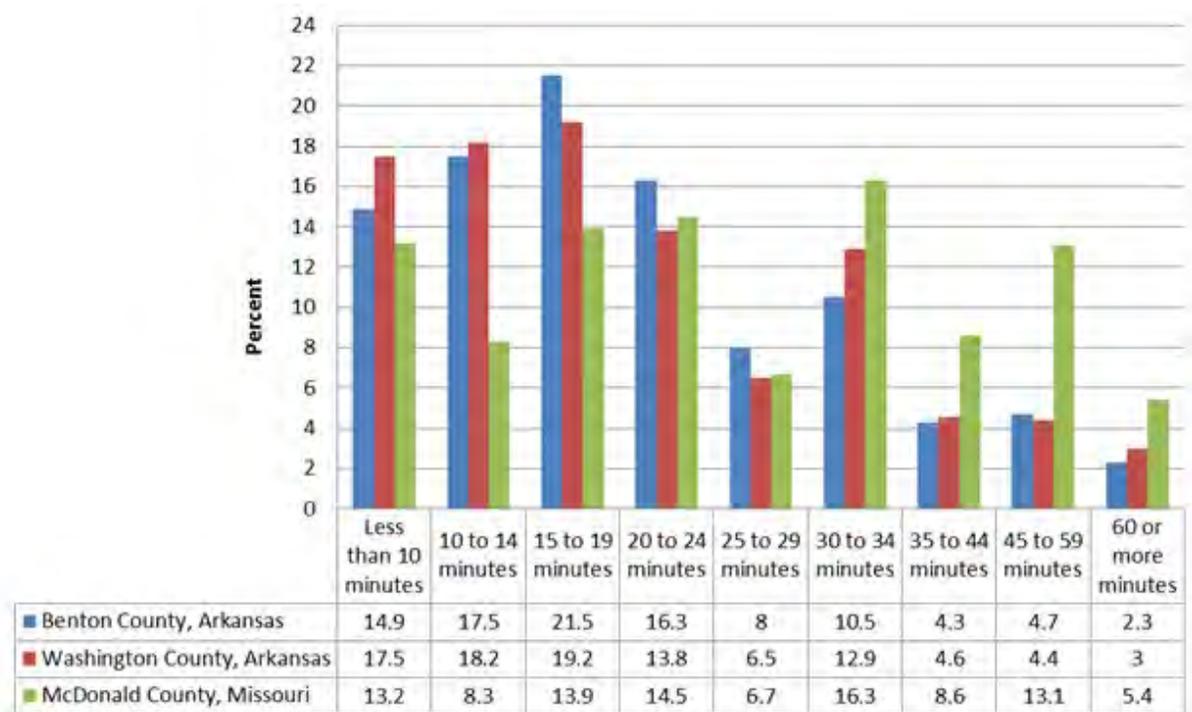


Figure 7.4 - Travel Time Estimate ACS 2015-2019

Daily Vehicle Miles Traveled

Table 7.1 and Table 7.2 summarize the daily vehicle miles traveled in 2019 by road functional class for Benton and Washington Counties.

Route Sign	Functional Class	Pop: < 5,000 Rural		Pop: 5,000 to 49,999 Small Urban		Pop: >=50,000 Urbanized		Total	
		Road Length	DVMT	Road Length	DVMT	Road Length	DVMT	Road Length	DVMT
State Highway	Interstate	0.00	0	0.00	0	17.29	1,208,363	17.29	1,208,363
	Other Freeways & Expressways	0.00	0	0.00	0	0.42	22,842	0.42	22,842
	Other Principal Arterials	22.48	331,533	5.27	135,271	35.40	841,094	63.16	1,307,898
	Minor Arterials	50.73	232,913	22.96	218,576	82.66	784,438	156.35	1,235,927
	Major Collectors	88.86	233,120	7.32	29,009	39.93	171,660	136.11	433,789
	Minor Collectors	0.00	0	0.00	0	0.00	0	0.00	0
	Locals	0.00	0	0.23	23	0.00	0	0.23	23
	Total	162.08	797,566	35.77	382,879	175.71	3,028,397	373.56	4,208,842
County Roads	Other Freeways & Expressways	0.00	0	0.00	0	0.00	0	0.00	0
	Other Principal Arterials	0.00	0	0.00	0	0.00	0	0.00	0
	Minor Arterials	2.65	938	0.00	0	3.55	5,647	6.20	6,585
	Major Collectors	105.46	114,041	9.65	13,620	35.90	137,353	151.01	265,013
	Minor Collectors	59.53	19,322	0.00	0	12.06	3,573	71.59	22,894
	Locals	1,807.37	159,890	28.85	5,511	119.87	28,359	1,956.09	193,759
	Total	1,975.01	294,190	38.50	19,131	171.38	174,931	2,184.89	488,252
	City Streets	Other Freeways & Expressways	0.00	0	0.00	0	0.00	0	0.00
Other Principal Arterials		0.00	0	0.00	0	0.00	0	0.00	0
Minor Arterials		0.32	52	9.41	42,646	97.87	890,121	107.60	932,818
Major Collectors		16.24	6,006	24.97	44,373	177.38	371,069	218.59	421,447
Minor Collectors		4.00	3,681	1.26	740	8.75	5,157	14.01	9,578
Locals		52.95	14,311	132.62	43,763	1,482.65	558,376	1,668.22	616,450
Total		73.51	24,050	168.26	131,523	1,766.65	1,824,722	2,008.42	1,980,294
BENTON County Total		2,210.60	1,115,806	242.53	533,532	2,113.74	5,028,050	4,566.87	6,677,388

Table 7.1 - Benton County Daily Vehicle Miles Traveled (DMVT) for 2019 – Source: ARDOT

Route Sign	Functional Class	Pop: < 5,000 Rural		Pop: 5,000 to 49,999 Small Urban		Pop: >=50,000 Urbanized		Total	
		Road Length	DVMT	Road Length	DVMT	Road Length	DVMT	Road Length	DVMT
State Highway	Interstate	16.24	352,143	0.00	0	17.70	1,052,912	33.94	1,405,055
	Other Freeways & Expressways	0.00	0	0.00	0	3.24	102,135	3.24	102,135
	Other Principal Arterials	10.35	154,898	0.00	0	48.44	1,216,999	58.79	1,371,897
	Minor Arterials	70.94	202,698	0.00	0	54.84	600,359	125.78	803,057
	Major Collectors	80.61	90,051	0.00	0	16.49	51,472	97.10	141,523
	Minor Collectors	5.32	3,688	0.00	0	0.00	0	5.32	3,688
	Locals	2.64	161	0.00	0	6.14	6,241	8.77	6,402
	Total	186.11	803,639	0.00	0	146.83	3,030,120	332.95	3,833,759
County Roads	Other Freeways & Expressways	0.00	0	0.00	0	0.00	0	0.00	0
	Other Principal Arterials	0.00	0	0.00	0	0.00	0	0.00	0
	Minor Arterials	0.00	0	0.00	0	2.60	10,929	2.60	10,929
	Major Collectors	98.47	104,639	0.00	0	44.09	70,200	142.56	174,839
	Minor Collectors	148.02	57,302	0.00	0	19.48	14,215	167.50	71,517
	Locals	1,466.17	159,004	0.00	0	55.09	10,805	1,521.26	169,809
	Total	1,712.66	320,945	0.00	0	121.26	106,148	1,833.92	427,094
	City Streets	Other Freeways & Expressways	0.00	0	0.00	0	0.00	0	0.00
Other Principal Arterials		0.00	0	0.00	0	1.02	18,400	1.02	18,400
Minor Arterials		0.00	0	0.00	0	61.20	602,007	61.20	602,007
Major Collectors		9.47	7,104	0.00	0	174.45	624,563	183.92	631,667
Minor Collectors		3.42	5,921	0.00	0	10.06	6,739	13.48	12,659
Locals		41.95	14,308	0.00	0	851.48	407,607	893.43	421,914
Total		54.84	27,332	0.00	0	1,098.21	1,659,316	1,153.05	1,686,648
WASHINGTON County Total		1,953.61	1,151,916	0.00	0	1,366.30	4,795,584	3,319.92	5,947,500

Table 7.2 - Washington County Daily Vehicle Miles Traveled (DMVT) for 2019 – Source: ARDOT

As it can be noted from Table 7.3, the Daily and Annual VMT have increased comparing 2009 to 2019; however, the daily VMT per capita in the two-county area has fluctuated by approximately 1% and has been decreasing slightly over the last few years.

Year	Population Estimate	Daily VMT	Annual VMT	Daily VMT per capita
2009	416,394	9,840,518	3,591,789,070	23.63
2010	424,404	9,983,349	3,643,922,385	23.52
2011	435,662	10,094,273	3,684,409,645	23.17
2012	444,473	10,514,234	3,848,209,644	23.66
2013	454,054	10,761,582	3,927,977,430	23.70
2014	463,113	11,014,631	4,020,340,315	23.78
2015	475,084	11,663,293	4,257,101,945	24.55
2016	486,340	12,008,651	4,395,166,266	24.69
2017	498,296	12,243,078	4,468,723,470	24.57
2018	509,569	12,483,276	4,556,395,740	24.50
2019	518,328	12,624,888	4,608,084,120	24.36

Table 7.3 - Annual Vehicles Miles of Travel in the Two County Area Source: ARDOT

Both the Table 7.4 and Figure 7.5 indicate an increasing trend of the total VMT in both Washington and Benton Counties.

	2009		2010		2011		2012		2013		2014	
	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT
Benton	5,209,912	1,901,617,880	5,273,634	1,924,876,410	5,297,149	1,933,459,385	5,561,922	2,035,663,452	5,690,060	2,076,871,900	6,036,296	2,203,248,040
Washington	4,630,606	1,690,171,190	4,709,715	1,719,045,975	4,797,124	1,750,950,260	4,952,312	1,812,546,192	5,071,522	1,851,105,530	4,978,335	1,817,092,275
2 Counties	9,840,518	3,591,789,070	9,983,349	3,643,922,385	10,094,273	3,684,409,645	10,514,234	3,848,209,644	10,761,582	3,927,977,430	11,014,631	4,020,340,315
Statewide	90,854,940	33,162,053,100	92,188,754	33,648,895,210	90,288,068	32,955,144,820	91,423,220	33,460,898,520	91,756,533	33,491,134,545	93,169,936	34,007,026,640
	2015		2016		2017		2018		2019			
	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT		
Benton	6,275,314	2,290,489,610	6,458,633	2,363,859,678	6,559,181	2,394,101,065	6,699,070	2,445,160,550	6,677,388	2,437,246,620		
Washington	5,387,979	1,966,612,335	5,550,018	2,031,306,588	5,683,897	2,074,622,405	5,784,206	2,111,235,190	5,947,500	2,170,837,500		
2 Counties	11,663,293	4,257,101,945	12,008,651	4,395,166,266	12,243,078	4,468,723,470	12,483,276	4,556,395,740	12,624,888	4,608,084,120		
Statewide	95,606,254	34,896,282,710	97,685,237	35,752,796,742	99,598,641	36,353,503,965	100,648,852	36,736,830,980	101,668,223	37,108,901,395		

Table 7.4 - Daily Vehicles Miles of Travel and Annual Vehicles Miles of Travel in the 2 County Area and Statewide Arkansas (2009-2019)

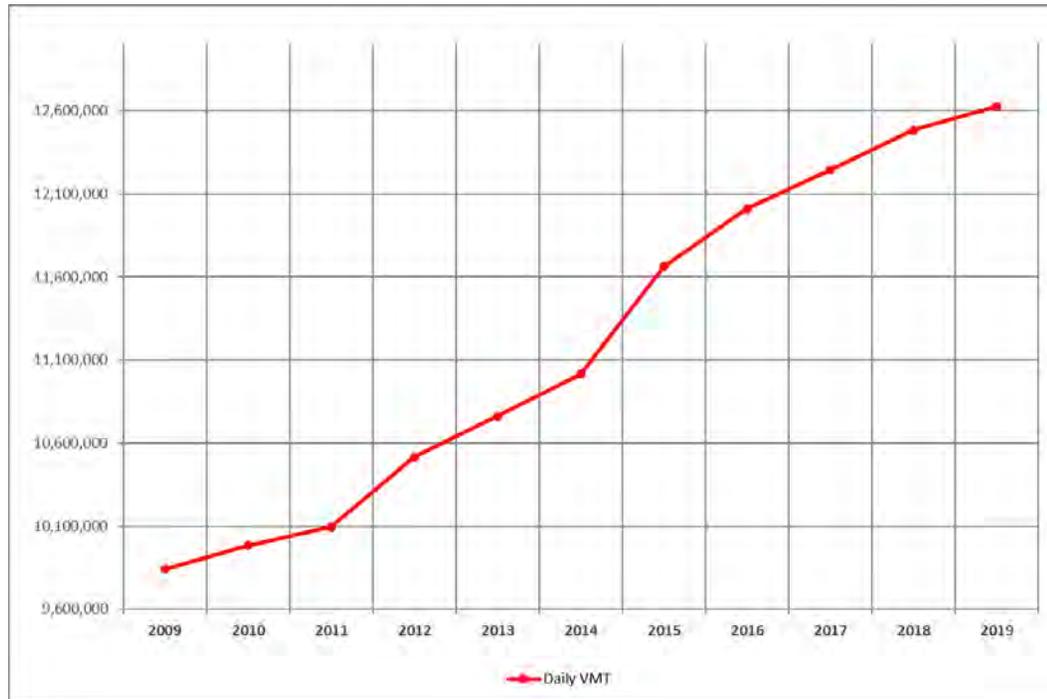


Figure 7.5 - Daily Vehicle Miles of Travel (VMT) Benton and Washington Counties 2009-2019

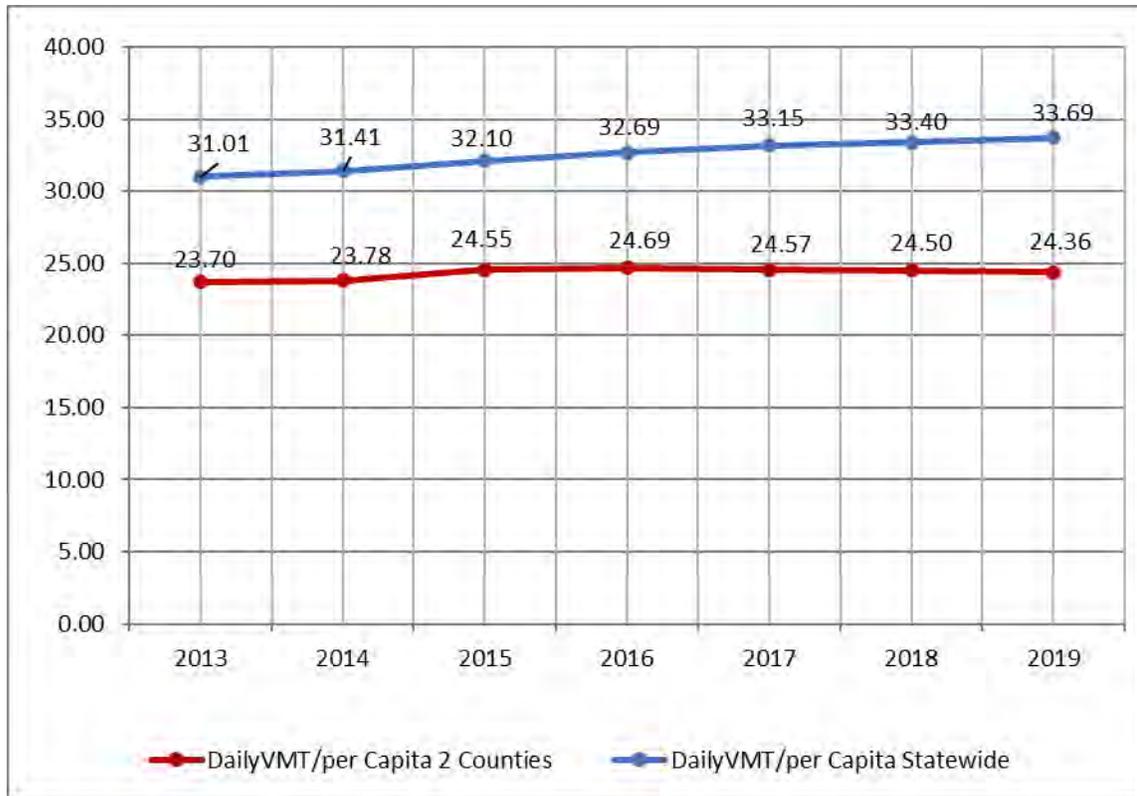


Figure 7.6 - Daily Vehicles Miles Traveled Per Capita for Benton and Washington Counties and Arkansas Statewide

TRAVEL FORECASTING MODEL

A travel demand or forecasting model is typically utilized by planners, engineers, MPOs and state departments of transportation to forecast future year transportation system deficiencies that may not exist today. These agencies also use models to evaluate the impact of alternative transportation solutions for development of long-range transportation plans. They are primarily used to forecast traffic flows on the transportation system. Models are generally mathematical expressions that are used to replicate the movement of people and vehicles within a transportation system. The traffic forecasts are based on forecasted land use, demographic data, socio-economic factors and travel patterns unique to the region. Travel models are also created to support decision making by providing information about the impacts of alternative transportation and land use policies, as well as demographic and socio-economic trends. A Travel Forecasting Model can be used in a variety of ways, such as for:

Specific Highway Construction Projects:

- Five-to-thirty-year forecasts
- Traffic impact of changes in land use and development
- Traffic pattern and volumes that are used by city and regional planners before deciding on roads improvements or construction

Transportation Studies:

- Major investment studies
- Interchange justification studies
- Bypass studies
- Freight studies
- Corridor studies
- Transit studies

General Highway Planning:

- Traffic impact of changes in land use and development
- Traffic impacts of new roadways or closing roadways
- Evaluate bypasses
- Generate inputs to micro simulation models
- Accident prone locations identification

Development of Long-Range Transportation Plans:

- State and Regional Plan and TIP development
- Traffic impact of changes in land use and development
- Congestion Management Programs
- Forecast regional pollution from vehicles
- Evaluate Environmental Justice
- Transit route planning

Other uses for the model:

- Provides inputs for site-specific studies (including whole cities) that will make studies more accurate (by looking at the big picture) and less costly (future projections for major roads will be readily available to cities and consultants).
- Gives the local jurisdictions an on-going resource of traffic count projections to answer “what-if” questions such as:
 - What if we build a four-lane segment here versus a three lanes road segment?
 - What if we did not make any road improvements in the future? Would more people take transit? How bad would congestion be? What if we add an additional lane?
 - What if a large shopping mall will be built at this location versus that location?
 - What if we put in this east/west corridor?
 - What if we increased mixed-use development? Would more people walk? Would there be more intrazonal trips (origin and destination zone are the same)?

- **Provides jurisdictions with results for traffic scenarios such as:**
 - Projected traffic counts for the base year as well as forecast years
 - Traffic counts for different road improvement scenarios
 - Traffic counts for intersection improvement and signalization analysis
 - Daily vehicle miles traveled in a region

NORTHWEST ARKANSAS TRAVEL FORECASTING MODEL

In 2004 NWARPC and the AHTD hired Bernardin, Lochmueller & Associates, Inc. to develop the Northwest Arkansas Travel Demand Model for Benton and Washington Counties, AR. The base year for the model was 2005 and scenario runs have been developed for 2010, 2030 and 2035.

Between the years 2007-2010 NWARPC maintained the model in-house with continuous updates to the network, TAZs, socio-economic data, land use, etc. and used it for projects prioritization, scenarios and the 2035 Regional Transportation Plan and TIP.

In 2010, NWARPC hired Parsons Brinckerhoff to conduct a Western Beltway Corridor Study in Benton and Washington County that would connect to the future Hwy. 549 (Bella Vista bypass) in the northern part of Benton County. Part of the Study was to update the existing model to add McDonald County, Missouri to the study area. The model structure and code were also improved as part of the analysis.

In 2010, NWARPC also administered a study to develop a Transit Development Plan (TDP) in cooperation with the two area transit agencies, Ozark Regional Transit, Inc. and the University of Arkansas Razorback Transit, and Connetics Transportation Group consulting firm.

In November 2012, NWARPC started a Transportation Alternatives Analysis Study that was funded by FTA and NWARPC matching funds as part of an Alternatives Analysis grant awarded that year. NWARPC contracted URS Corporation to determine the need for a major transit investment in the corridor, and to estimate costs, benefits and possible environmental impacts of the various alternatives. As part of the analysis, the consultants used the existing travel demand model to generate ridership estimates in the analyzed corridor. Alliance Transportation Group was the sub-consultant hired to develop the conceptual transit ridership for the Study.

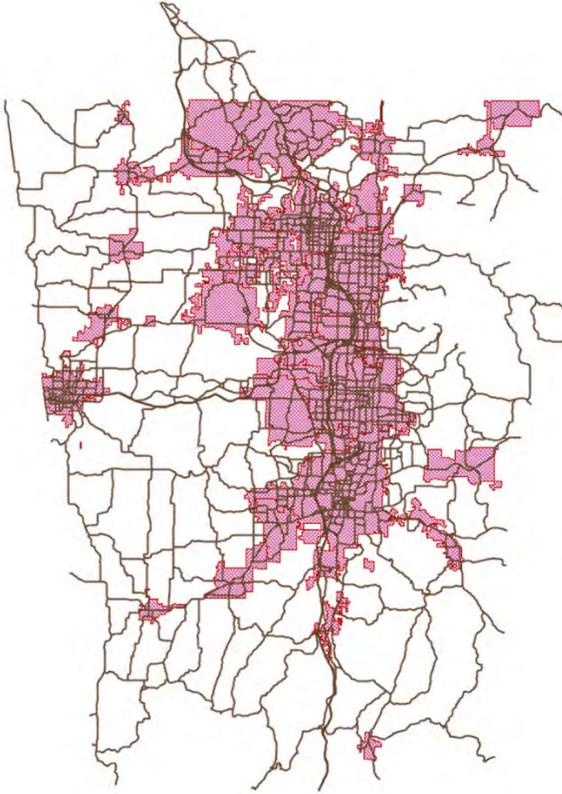
As a requirement of the Census Bureau, the MPO delineated new TAZs and Transportation Analysis Districts (TADs) for the 2010 Census Bureau data collection. The newly delineated 673 internal TAZs and 11 TADs were accepted by the Census Bureau in 2011 and are available at NWARPC.

In July of 2014, the upgrade of the existing travel forecasting model began which added mode choice to the model for the purpose of modeling vehicular travel as well as transit in the MPA. Under this scope of work NWARPC hired Parsons Brinckerhoff to conduct a travel forecasting model upgrade that addressed all the model needs for a functional true mode choice model. The purpose of the project was to develop the mode choice model to include the transit component; upgrade the model from the 2005 base year to 2010 base year; add the Missouri portion of the MPA into the model; and develop the 2020, 2030 and 2040 forecast years. The upgraded model also incorporated a special generator that is easier to configure and update, reconfigured the GISDK code to current industry standards, and identified ways of utilizing the travel time results from the model to aid the local transit agencies in their route planning, evaluation and needs assessment. The validation report for this upgrade can be found at this link: [NWA Travel Demand Forecasting Model](#).

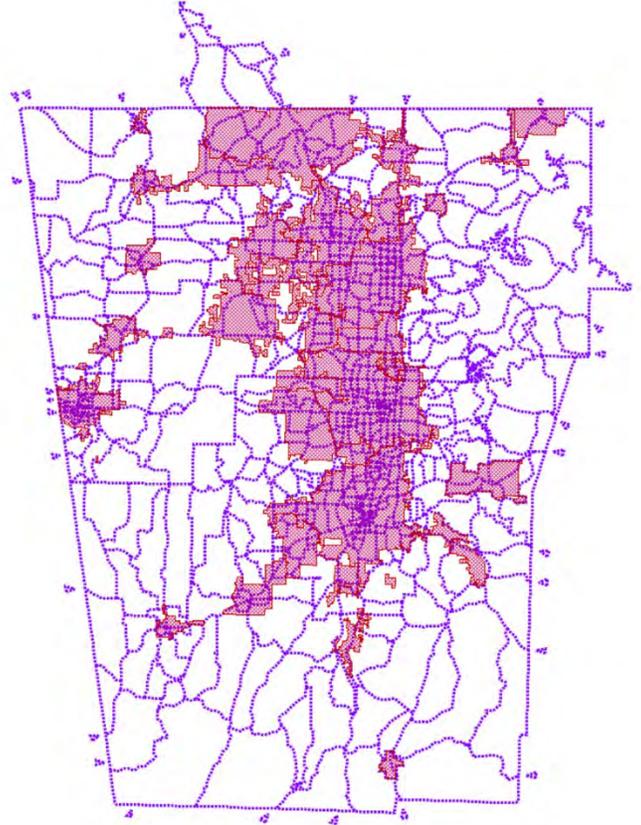
Between 2016-2020 the Northwest Arkansas Travel Forecasting Model was upgraded to update the base year to 2018 and forecast years to 2025, 2035 and 2045 and calibrate the transit component to the 2018 completed On-board transit origin-destination survey. WSP completed enhancements to the mode choice model work by refining the model calibration and performing additional sensitivity testing. This model enhancement improved the coded transit route system and the transit assignment calibration and validation. More about the model upgrade and validation are

detailed in the next section.

The Northwest Arkansas Travel Forecasting model area includes Washington and Benton Counties in Arkansas and the McDonald County, Missouri portion of the MPA. This area includes 678 internal TAZs (Traffic Analysis Zones), of which 348 in Benton County, 324 in Washington County and 6 in McDonald County. The road network includes roads classified Collectors, Arterials and Interstate. The road network and TAZs extent in the MPA are illustrated below.



Map 7.1 – 2045 Road Network and city limits



Map 7.2 – 2045 TAZs and city limits

The Northwest Arkansas Travel Forecasting Model is a regional model based on the traditional four-step sequential modeling method with a feedback loop. The process is summarized in the following steps:

- **Trip Generation** – Trip Generation calculates the decimal number of trips of each purpose produced by each household. It does this via regression models estimated on data collected in a 2005 household travel survey.
- **Trip Distribution** – Trip Distribution aggregates the household trip productions by purpose and by TAZ and calculates the trip attractions by purpose by TAZ. Productions (Ps) and Attractions (As) are matched up based on a gravity model whereby productions are pulled towards TAZs based on their number of attractions and the travel time from the production TAZ. The skims are used to determine travel times.
- **Mode Choice** – The mode of travel for each PA pair is determined based on a logit model which takes the level of service characteristics, the household attributes and the cost of each mode into consideration. The skims are used to determine level of service and cost for each mode.
- **Time of Day** – The PA matrices are transformed into origin/destination pairs by time period (am peak, pm peak, off-peak) based on observed percentages of daily traffic.
- **Assignment** – The auto trips are assigned to the highway network and the transit trips are assigned to the transit network. Travel times and costs are re-calculated and are fed back to the trip distribution and mode choice steps. This feedback is done multiple times so that congested travel times are considered in the final set of choices.

Below is a flow-chart of the model. The main model steps are Trip Generation, Destination Choice, Mode Choice and Assignment (both highway and transit). There are several initial steps, like setting the initial speed and capacity of highway links based on area type and determining the number of households in each zone that own 0, 1, 2 or 3+ cars, that are executed prior to the main steps. In addition, the NWA TDM models external trips, special generator trips and truck/commercial vehicle trips.

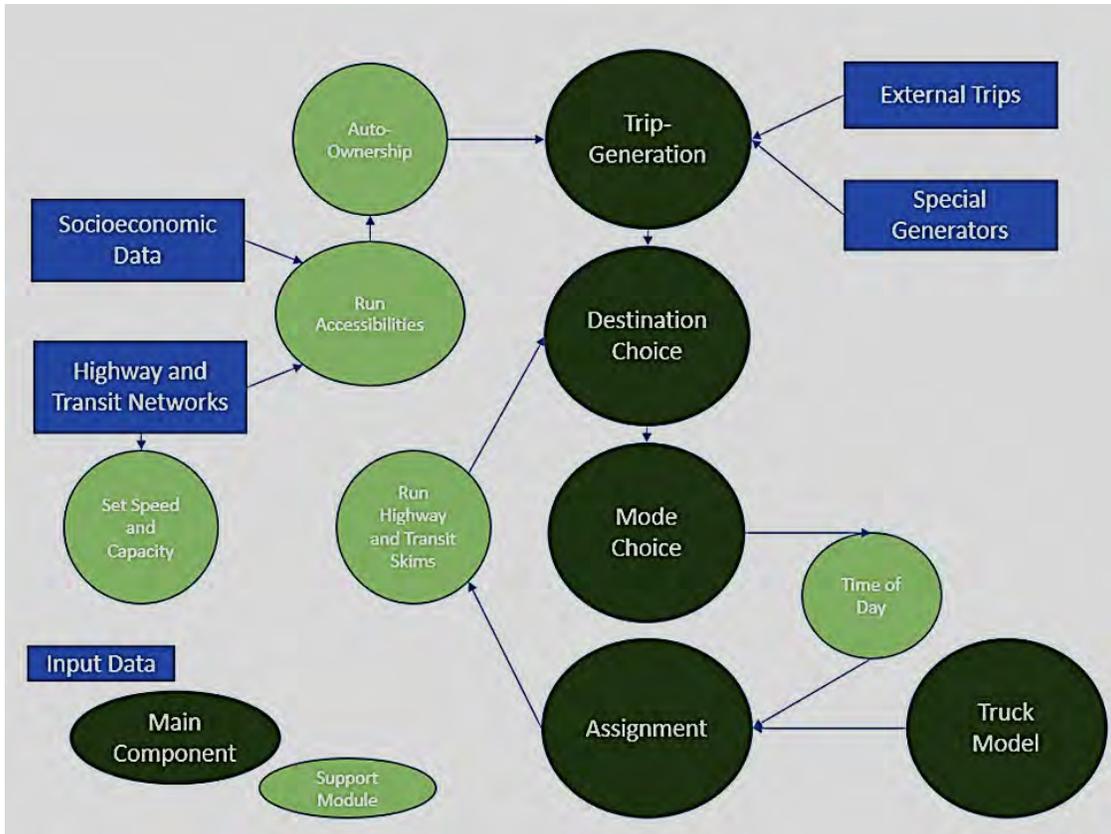


Figure 7.7 - Travel Demand Forecasting Steps

Model Steps:

The following are updated model steps and statistics based on the most recent model upgrade:

- **Household Generation**

A recent transit on-board survey was completed which enabled a better understanding of transit access, rider profiles, model calibration. Land-use and demographics were captured through employment and household data at Traffic Analysis Zone (TAZ) level:

- In 2018 there are approximately 200K HHs (520K persons) and approximately 250K Jobs (Industry, retail, office and service)
- In 2045 there are approximately 380K HHs (980K persons) and approximately 465K Jobs
- The Northwest Arkansas Region’s population and employment almost doubles in 25 years

- **Auto Ownership**

- 5% of HHs have 0 vehicles, 21% have 3 or more vehicles
- **Trip Generation**
 - Average trips per HH target was 9.9
- **Destination Choice**
 - 75% of work trips are 15 miles or less, 80% of university trips are < 5 miles, only 6% of school trips are less than 15 miles
 - Average trip length for work trips is 12 miles, shopping/personal business is about 6.7 miles
- **Mode Choice**
 - Regional transit share is less than 1%
 - 87% of work trips are drive-alone (dominate mode for all purposes)
 - 25% of university trips are transit, 13% non-motorized, almost 50% drive alone

Mode of Trip	2018	2045
Auto	1,570,000	2,900,000
Transit	9,000	15,000
Walk/Bike	62,000	105,000
Total Household Trips	1,640,000	3,000,000

Trip Mode	2018	2045
Auto	95.7%	96.0%
Transit	0.6%	0.5%
Walk/Bike	3.8%	3.5%

Daily Weekday Resident Trips by Mode – 2018 and 2045

Daily Weekday Resident Trips by Purpose – 2018 and 2045

Types of Trips: In the Regional Travel Forecasting Model, trips are classified by trip purpose. Broadly, trips are grouped into the following purposes:

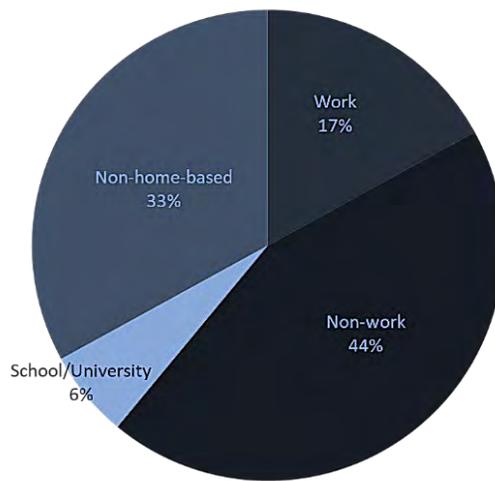
Home-Based Work (HBW): These trips are from home to work and from work back to home. They occur more in peak hours and are a large component of congestion.

Home-Based Shop/Personal Business (HBSB): These trips begin or end at home and cover the range of other trips that people make - shopping, visiting friends, or appointments.

Non-Home-Based (NHB): These are the trips made while people are out of their residence, either at work (e.g., a trip to lunch), or between stops while running errands (e.g., a trip from the grocery store to the cleaners). Generally, given their nature, non-home-based trips are shorter than home-based trips and are often made at off-peak travel times.

In addition to these trips, the model also includes the following types of trips: **Home-Based School (HBSC), Home-Based University/College (HBU) and Home-Based Other (HBO)** as well as **Non-Home-Based Work (NHBW)**.

The mode share is illustrated in the pie-chart below. The majority of trips in both 2018 and 2045 (45 percent) are non-work related, followed by non-home-based types of trips (33 percent).



Mode Share – 2018 and 2045

Base Year Model Calibration and Validation

Version 3.0.0 of the NWA TDM was calibrated and validated to confirm that the changes made to the model subcomponents still provided highway and transit assignments that could be validated against observed data in the 2018 base year.

Trip Purpose	Observed (2017 NHTS)		Estimated (Model)	
	Trips	Percent	Trips	Percent
Home-based Work (HBW)	8,901,384	15%	327,342	17%
Home-based University (HBU)	412,322	1%	27,899	1%
Home-based School (HBSC)	1,606,200	3%	88,235	5%
Home-based Shopping Business (HBS)	15,530,720	26%	469,221	24%
Home-based Other (HBO)	12,206,072	20%	373,616	19%
Non-home Based Work (NHBW)	3,971,321	7%	132,722	7%
Non-home Based Other (NHBO)	17,468,043	29%	503,012	26%
All	60,096,062	100%	1,922,047	100%

Table 7-5: 2018 Trip Comparison

Trip Purpose	Observed Average Length	Estimated Average Length
Home-based Work (HBW)	11.9	10.6
Home-based University (HBU)	7.6	5.3
Home-based School (HBSC)	5.8	6.8
Home-based Shopping Business (HBSB)	6.7	4.9
Home-based Other (HBO)	9.1	7.1
Non-home Based Work (NHBW)	11.5	8.7
Non-home Based Other (NHBO)	7.4	6.3

Table 7-6: Average Trip Length (Miles) by Trip Purpose

Trip Generation Calibration

The 2018 trip generation results were calibrated to match the percentage of trip productions by purpose and trip rates by household observed in the 2017 NHTS data. Due to the small number of Arkansas households, the targets also include households from Mississippi, Missouri and Louisiana.

The comparison is shown in Table 7.5. Clearly, the total trips from the survey does not match but the percentage of trips by purpose matches reasonably well.

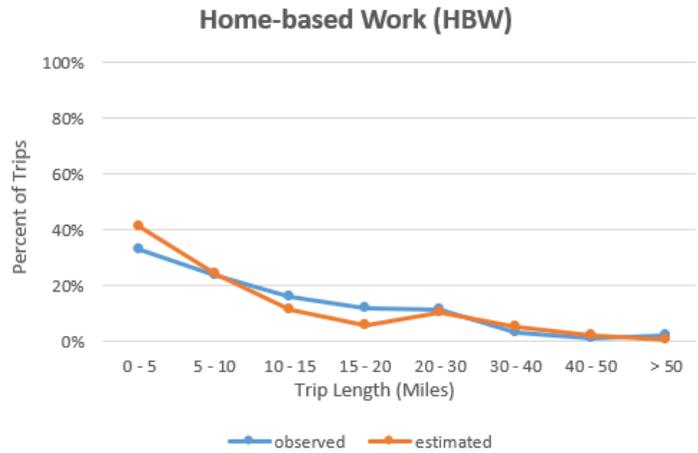
The observed trips per household were 9.9 and the modeled trips per household were 9.8. This aligns with values in other regions which range between 8 and 10 daily trips per household on average.

Calibration of Destination Choice

The calibration of the destination choice model focused on trip-length frequency distributions by purpose and average trip lengths by purpose. The 2017 NHTS data was used to develop the targets. Table 7-6 shows average trip lengths by purpose.

Figure 1: Trip Length Frequency Distributions (TLFD) by Purpose

Home-based Work (HBW)		
Distance Categories (Miles)	Percentage	
	Observed	Estimated
0 - 5	33%	41%
5 - 10	24%	24%
10 - 15	16%	11%
15 - 20	12%	6%
20 - 30	11%	10%
30 - 40	3%	5%
40 - 50	1%	2%
> 50	2%	1%
Total	100%	100%



The figures below show the percentage of trips in each distance bin and the observed vs. estimated graphs.

Figure 7-8: Home-based Work

Home-based University (HBU)		
Distance Categories (Miles)	Percentage	
	Observed	Estimated
0 - 5	79%	76%
5 - 10	0%	8%
10 - 15	6%	4%
15 - 20	2%	2%
20 - 30	6%	6%
30 - 40	5%	3%
40 - 50	0%	0%
> 50	2%	0%
Total	100%	100%

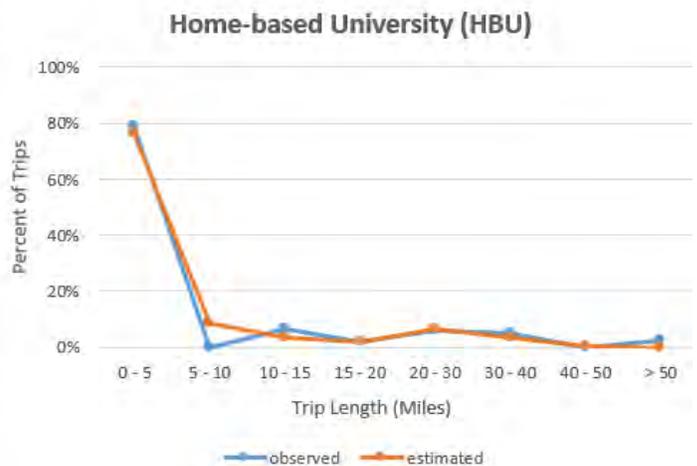


Figure 7-9: Home-based University

Home-based School (HBSC)		
Distance Categories (Miles)	Percentage	
	Observed	Estimated
0 - 5	63%	63%
5 - 10	18%	21%
10 - 15	13%	5%
15 - 20	2%	2%
20 - 30	3%	4%
30 - 40	0%	3%
40 - 50	1%	1%
> 50	0%	0%
Total	100%	100%

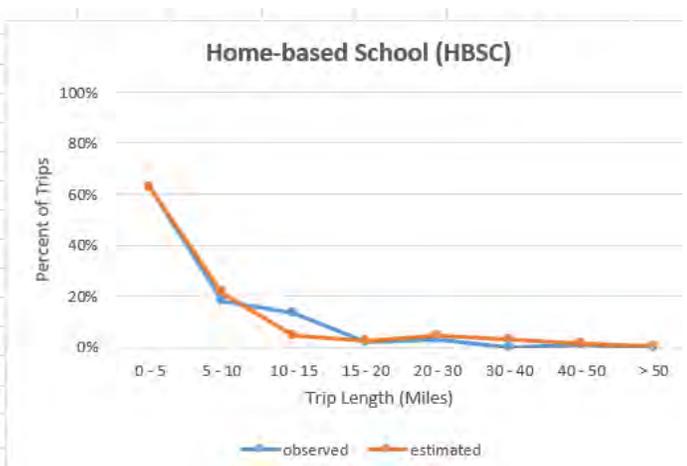


Figure 7-10: Home-based School

Home-based Shopping and Personal Business (HBSHPB)		
Distance Categories (Miles)	Percentage	
	Observed	Estimated
0 - 5	62%	66%
5 - 10	20%	25%
10 - 15	8%	6%
15 - 20	4%	1%
20 - 30	4%	1%
30 - 40	1%	0%
40 - 50	0%	0%
> 50	1%	0%
Total	100%	100%

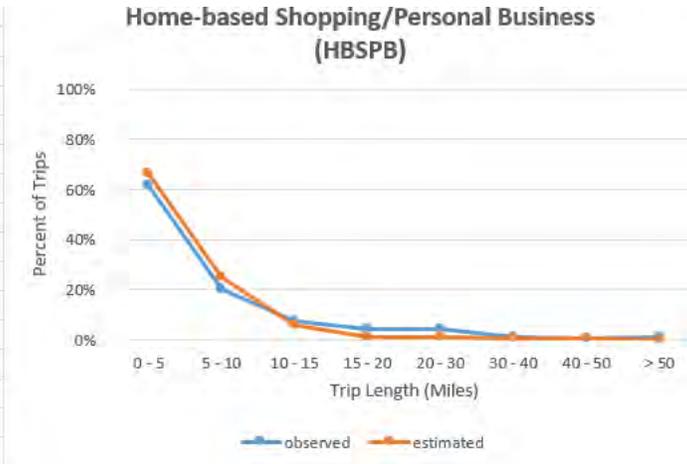


Figure 7-11: Home-based Shopping and Personal Business

Home-based Other (HBO)		
Distance Categories (Miles)	Percentage	
	Observed	Estimated
0 - 5	58%	55%
5 - 10	15%	26%
10 - 15	11%	9%
15 - 20	4%	3%
20 - 30	6%	3%
30 - 40	2%	2%
40 - 50	1%	1%
> 50	3%	0%
Total	100%	100%

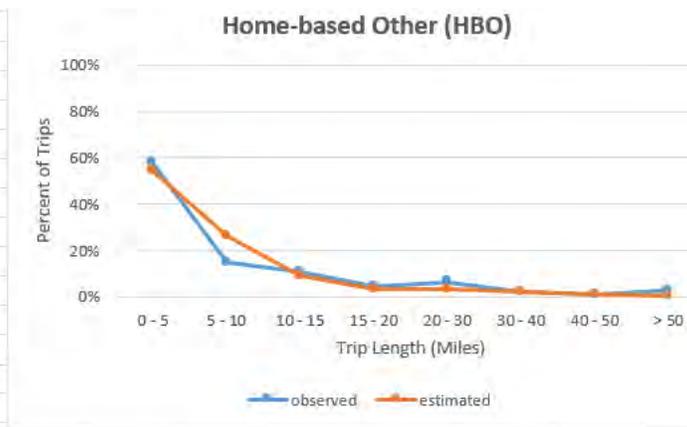


Figure 7-12: Home-based Other

Non-home Based Work (NHBW)		
Distance Categories (Miles)	Percentage	
	Observed	Estimated
0 - 5	50%	54%
5 - 10	20%	19%
10 - 15	11%	6%
15 - 20	5%	5%
20 - 30	6%	10%
30 - 40	3%	4%
40 - 50	2%	1%
> 50	2%	0%
Total	100%	100%

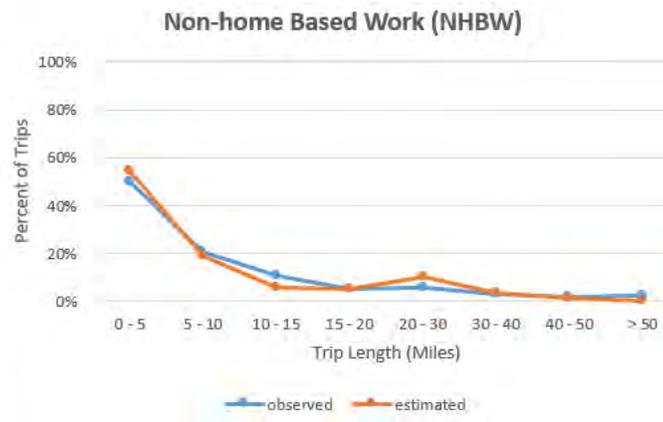


Figure 7-13: Non-home-based Work

Non-home Based Work (NHBO)		
Distance Categories (Miles)	Percentage	
	Observed	Estimated
0 - 5	67%	67%
5 - 10	15%	18%
10 - 15	6%	4%
15 - 20	4%	3%
20 - 30	4%	6%
30 - 40	2%	2%
40 - 50	0%	1%
> 50	1%	0%
Total	100%	100%

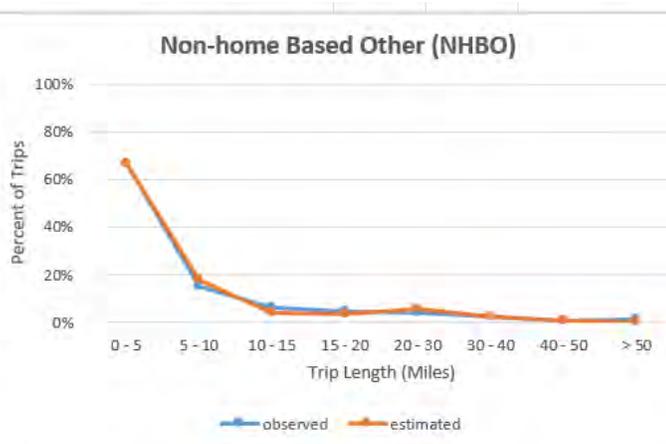


Figure 7-14: Non-home-based Other

Mode Choice

NWARPC hired ETC in 2018 to complete a transit on-board survey. This survey data was used to calibrate the mode choice model for the 2018 base year. Below are some model comparisons after calibration.

Mode	Observed	Estimated
Auto	97.1%	96.2%
Transit	0.6%	0.5%
Non-motorized (walk + bike)	2.3%	3.3%
Total	100.0%	100.0%

Table 7-7: Observed to Estimated Mode Shares in NW Arkansas

Observed							
Trip Mode	Observed Trip Percent						
	HBW	HBU	HBSC	HBSB	HBO	NHB	Total
Drive Alone	87%	47%	61%	87%	69%	58%	68%
Shared Ride 2	8%	9%	13%	8%	11%	16%	13%
Shared Ride 3	3%	1%	20%	4%	17%	24%	17%
Drive to Razorback (>= 5 miles)	0%	4%	0%	0%	0%	0%	0%
Walk to Transit	0%	21%	0%	1%	0%	0%	0%
PnR to Transit (<5 miles)	0%	4%	0%	0%	0%	0%	0%
KnR to Transit	0%	0%	0%	0%	0%	0%	0%
Walk	2%	11%	5%	1%	3%	2%	2%
Bike	0%	2%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%

Estimated							
Trip Mode	Estimated Trip Percent						
	HBW	HBU	HBSC	HBSB	HBO	NHB	Total
Drive Alone	82%	46%	62%	87%	68%	58%	71%
Shared Ride 2	10%	9%	13%	8%	12%	16%	12%
Shared Ride 3	3%	0%	20%	3%	16%	23%	13%
Drive to Razorback (>= 5 miles)	0%	2%	0%	0%	0%	0%	0%
Walk to Transit	0%	23%	0%	0%	0%	0%	0%
PnR to Transit (<5 miles)	0%	5%	0%	0%	0%	0%	0%
KnR to Transit	0%	0%	0%	0%	0%	0%	0%
Walk	4%	12%	5%	2%	4%	2%	3%
Bike	0%	2%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%	100%

Table 7-8: Detailed Observed Mode Shares to Modeled Shares

Highway Assignment Validation

The trip generation, trip distribution and mode choice models were calibrated to observed data and the resulting trips were assigned to either the highway or the transit network, depending on the mode chosen.

There were 900 count locations used to compare the model results to however it should be noted that the NWARPC lacked confidence in the observed highway volumes. The model shows higher freeway volumes, but it was decided to leave the validation alone since the observed counts were thought to be low. Table 7-9 below shows the number of observations by facility type within rural and urban TAZs, the sum of the counts on those links, and the corresponding modeled volumes.

Facility Type	Number of Links with Counts	Observed Count	Estimated Volume	Percent Difference	Percent RMSE
Interstate	24	1,172,500	1,433,455	22%	40%
Principal Arterial	222	4,177,167	4,528,738	8%	37%
Minor Arterial	171	1,328,284	1,434,671	8%	65%
Collector	368	1,528,015	1,411,706	-8%	71%
Local	15	45,790	40,710	-11%	49%
Ramp & Median Cross-over	100	572,630	675,586	18%	57%
Total	900	8,824,386	9,524,867	8%	

Table 7-9: Observed vs. Modeled Volumes by Facility Type

Table 7-10 shows the validation statistics by volume group. The largest variation is again in the high-count links (i.e. the freeways) which is believed to be a problem with the counts, not the modeled values.

Count Range	Number of Links with Counts	Observed Count	Estimated Volume	Percent Difference
< 5000	399	893,464	1,022,824	14%
5000 - 10000	216	1,551,422	1,434,730	-8%
10000 - 20000	143	1,971,500	2,066,158	5%
20000 - 30000	86	2,054,500	2,222,394	8%
30000 - 40000	41	1,364,500	1,585,788	16%
40000 - 50000	4	163,000	167,148	3%
> 50000	11	826,000	1,025,824	24%
Total	900	8,824,386	9,524,867	8%

Table 7-10: Observed vs. Modeled by Volume Group

The scatterplot in Figure 7-15 below show the observed count vs. the modeled volume at each count location. If the model replicated the observed counts exactly, then the points on the graph would all lie on the regression line and the R-squared value would be 1.0. The results again are skewed by the freeway counts that may not fully reflect the daily flow. In Figure 7-16 the I-49 counts vs. the I-49 modeled volumes are shown.

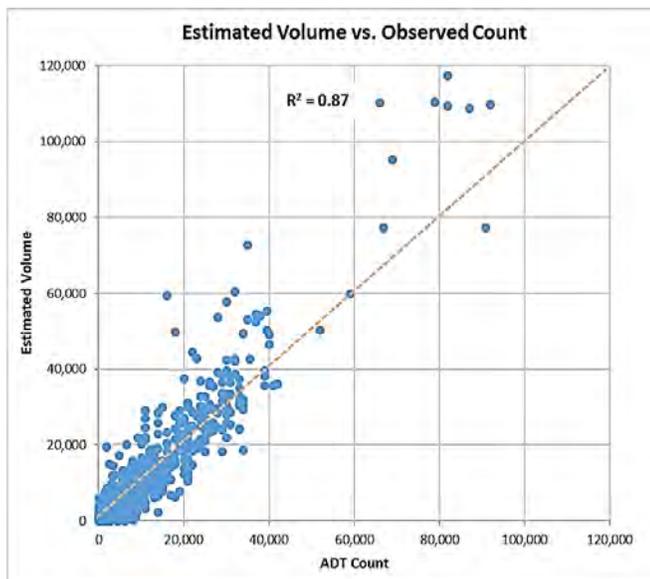


Figure 7-15: Scatterplot and R-squared Value for the 2018 Base Year Model

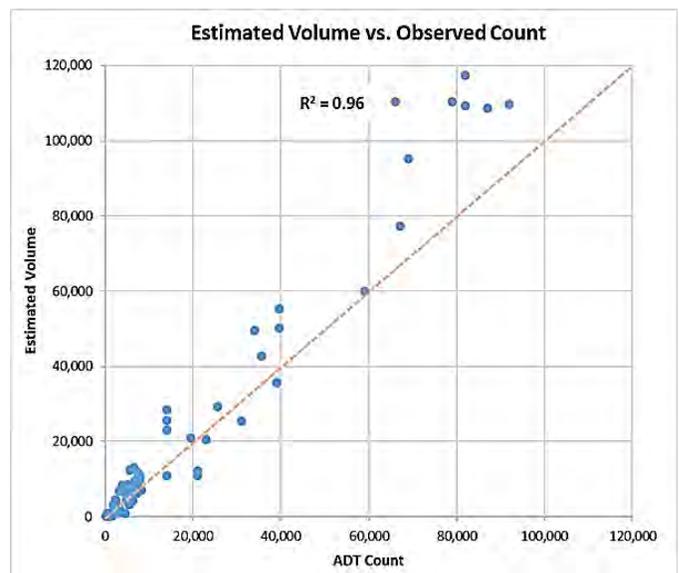


Figure 7-16: Scatterplot and R-squared Value for I-49 Count Locations

Transit Assignment Validation

The transit validation was done by looking at observed boardings by route for both Razorback Transit and Ozark Regional Transit (ORT). Several of the ORT transit routes had very low observed boardings which leads to large percent differences when compared to the model values (Table 7-11).

Agency	Route	Observed Boardings/Ridership (2018)	Estimated Boardings/Ridership	Percent Difference
Ozark	Route 1	154	38	
	Route 2	83	167	
	Route 3	58	92	
	Route 4	171	127	
	Route 11	86	157	
	Route 51	63	129	
	Route 52	28	56	
	Route 61	87	166	
	Route 62	75	74	
	Route 63	57	91	
	Route 64	14	81	
	Route 490	207	219	
	Ozark Total	1,083	1,397	29%
Razorback	Route 1	141	1	
	Route 4	141	0	
	Route 7	20	323	
	Route 11	2,237	2,082	
	Route 13	939	1,479	
	Route 17	122	493	
	Route 22	1,794	1,027	
	Route 26	1,342	2,063	
	Route 33	834	273	
	Route 35	596	202	
	Route 48	1,175	1,712	
		Razorback Total	9,341	
	Total	10,424	11,052	6%

Table 7-11: Observed Boardings Compared to the ETC On-board Survey

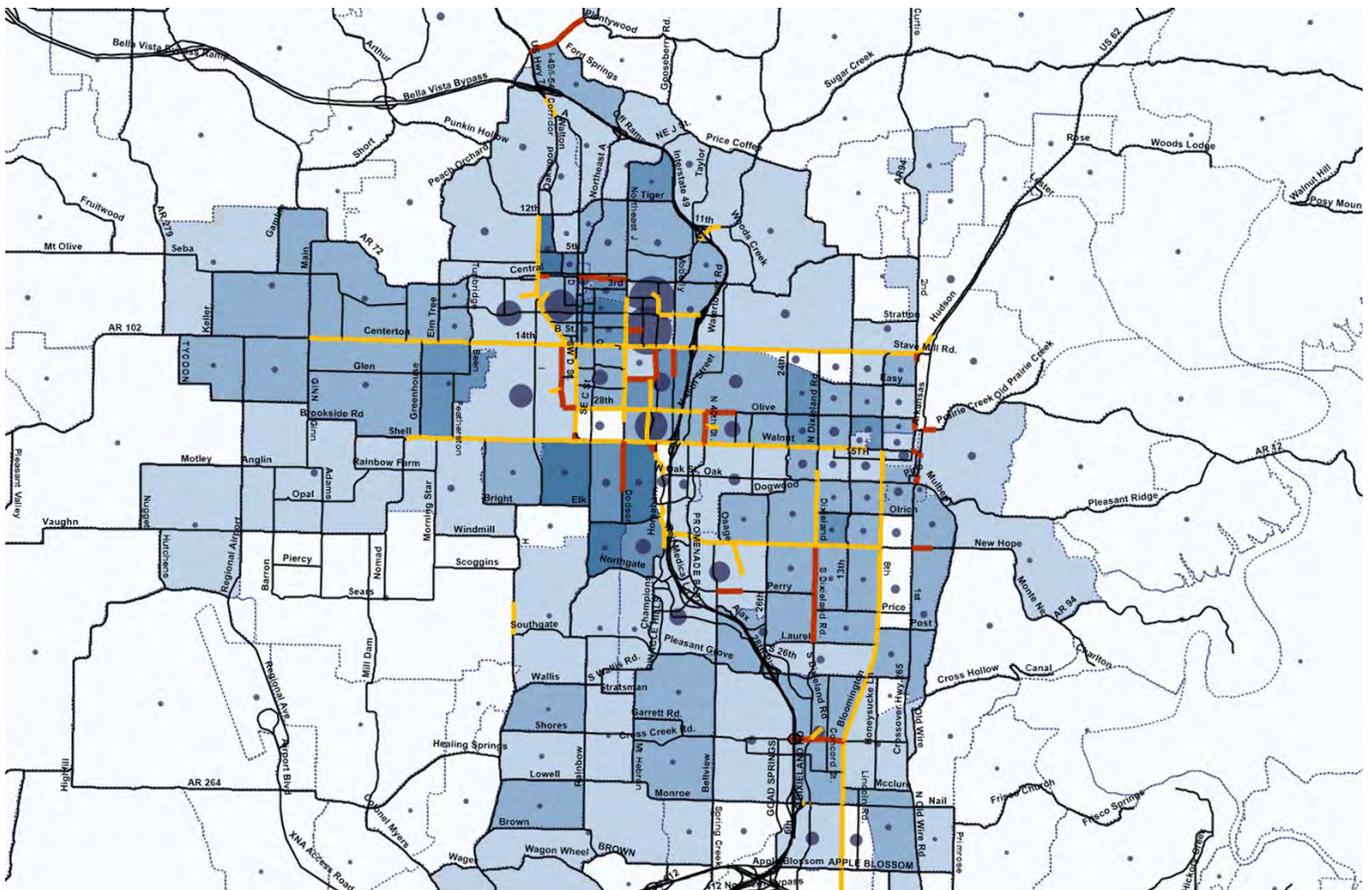
Travel Forecasting Results

The 2045 forecast model has proved beneficial in identifying segments of the network that may need improvements in the next 25 years. A series of selection sets have been developed based on a 2045 Fiscally Constrained list of projects and using forecasted socio-economic data from the model.

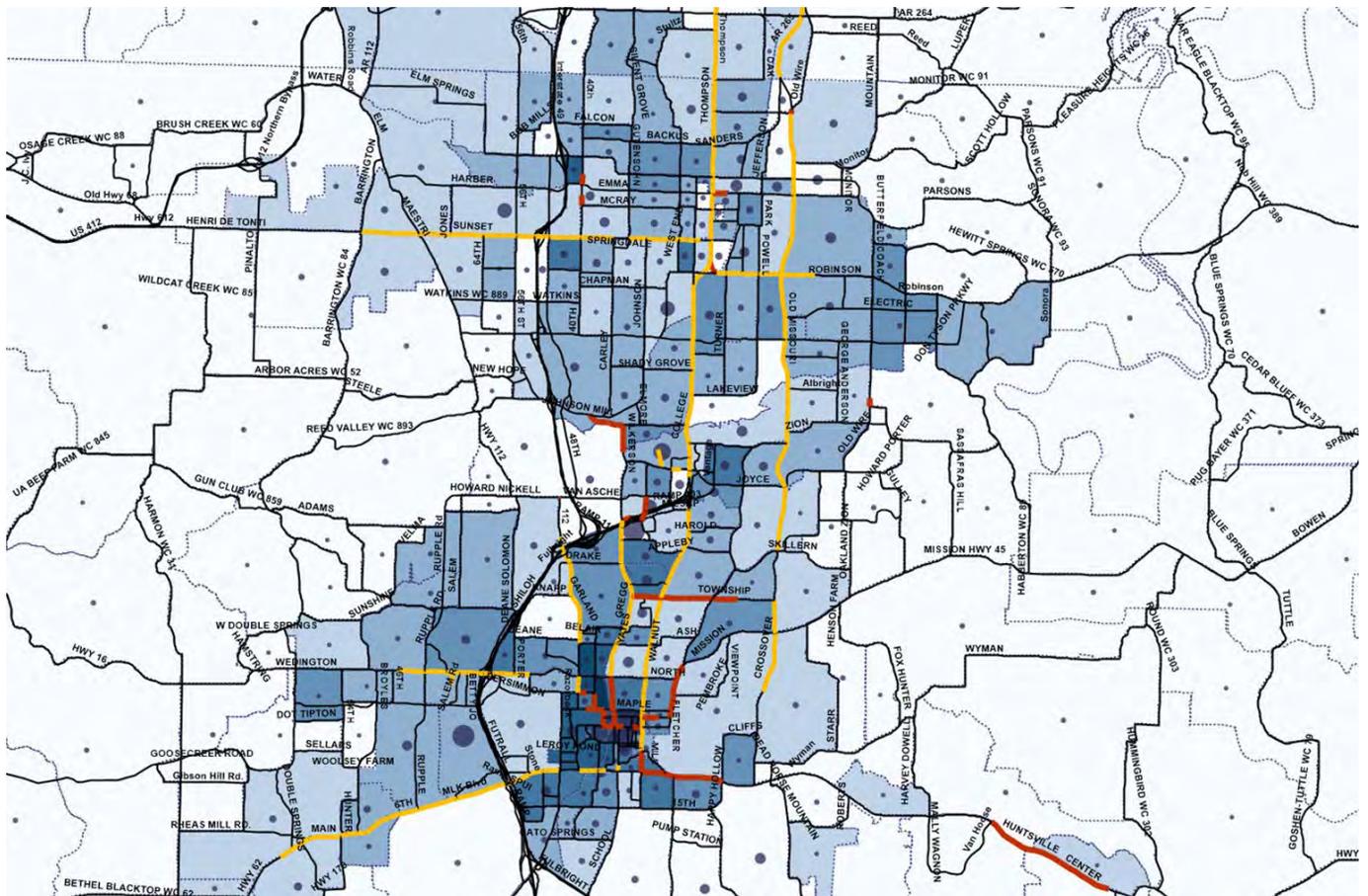
The Fiscally Constrained List for the road network consists of projects that can reasonably be expected to be funded with Federal-aid funds during the 25-year planning period. This is determined by estimates of Federal-aid funds that can reasonably be expected to come to the area given the area's highway network, Urbanized Area, population, etc. These estimates are provided by ARDOT and MoDOT and are not limits, nor are they guarantees of funding. They are conservative, reasonable estimates of future funding to guide development of the 2045 MTP. The Fiscally Unconstrained List includes projects not limited to the estimated available funding.

The following two maps represent selections from the 2045 Constrained Model runs with the following specifications:

- Two lane roads with at least 18,000 vehicles per day (vpd) and roads with four lanes or more and 36,000 vpd for the Constrained List of Projects (Map 7.3) for the urbanized corridor in Benton County and
- Two lane roads with at least 18,000 vpd and roads with four lanes or more and 36,000 vpd for the Unconstrained List of Projects (Map 7.4) for the urbanized corridor in Washington County



Map 7.3 - 2045 Constrained List of Projects with selected 2 lanes and 18,000+ volumes and 4+ lanes and 36,000+ volumes and employment density in Benton County



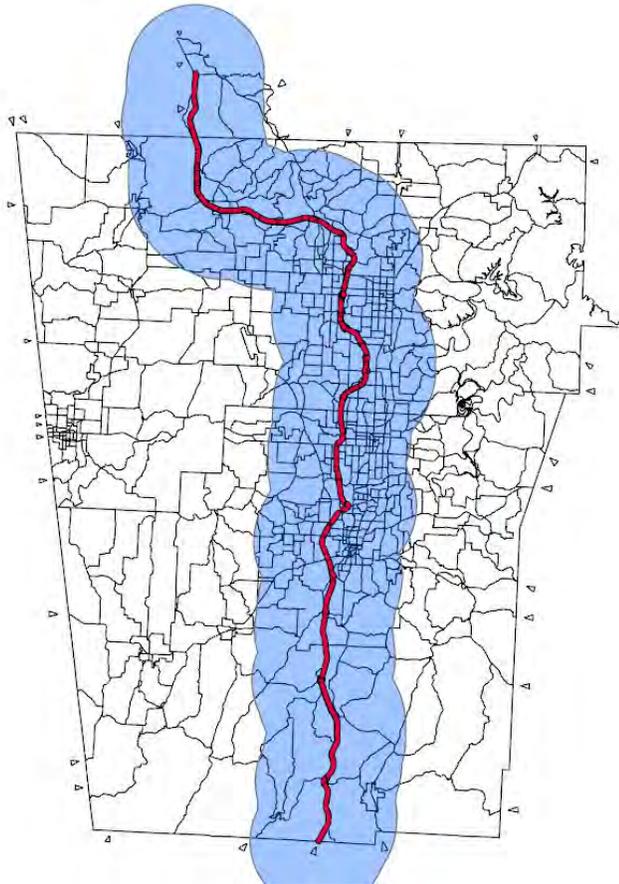
Map 7.4 - 2045 Constrained List of Projects with selected 2 lanes and 18,000+ volumes and 4+ lanes and 36,000+ volumes and employment density in Washington County

The red highlighted roads suggest potential for congestion in 2045 under the current planned road improvements. In general, given the projected increase in population and economic development in the region, the overall road system will become more and more congested in the next 25 years. Map 7-5 illustrates a buffer of 10 miles from I-49 for 2045. Based on the projected socio-economic data in the TAZs in this buffer, there will be 755,205 (77.5%) people and 424,284 (90.9%) jobs in 2045. There is no question that in this scenario most trips will occur between the TAZs in this corridor. Map 7.6 illustrates the total volume of traffic as a gradient on the 2045 Fiscally Constrained forecasted network. Maps 7-7 and 7-8 further illustrate 2045 projected density for both households and employment in the MPA.

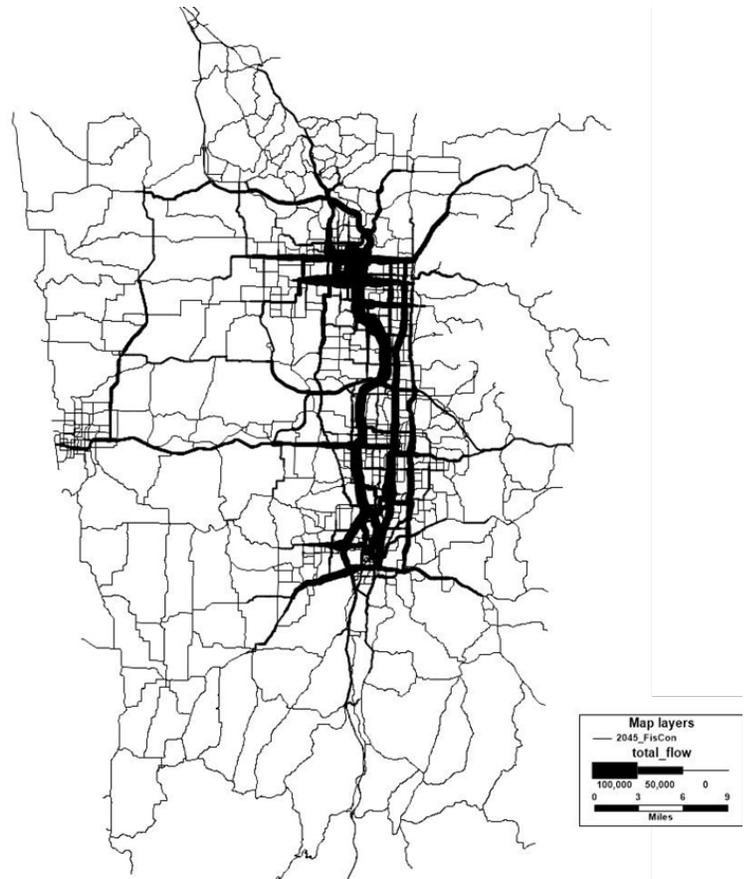
Key Modeling Takeaways

- Many cities and regions around the country are trying to reduce driving (reduce congestion) by introducing congestion pricing, cordon pricing, road usage charges, high parking costs, etc. As a result, cities and regions are using funds from the policies above to fund transit improvements. Locally in our region, no significant incentives/policies have been introduced so far.
- The “cost” of driving is one of the most important factors in travel modeling. Time is money and therefore all modes compete. Besides increasing the “cost” to drive, future mode share changes will be dependent on additional investment in other modes (walk, bike, transit) to reduce their cost.

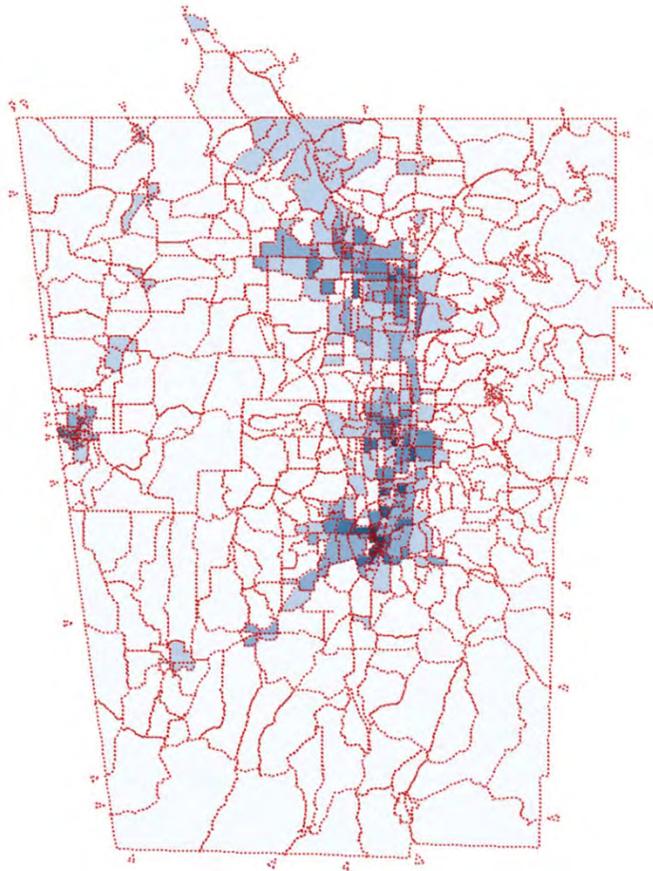
- The NWA Travel Forecasting Model has no significant projected changes in mode share over the next 25 years even if the *Connect Northwest Arkansas Transit Plan* was to be fully implemented - parallel improvements to the highway network keeps auto mode competitive.
- Historical surveyed/observed behavior establishes travelers' likelihood to make trips, own a vehicle, etc. and their **responses** to land-use and cost. Future behavior assumes the same **responses**
- Shifts in behavior require shifts in household composition, land-use, and/or cost of travel for example.
 - if driving becomes more costly (i.e. severe congestion in 2045), other modes will be more competitive
 - if land-use is mixed such walking and biking mode shares will increase
- For FTA's New Starts and Small Starts, FTA will review transit assumptions against actual Northwest Arkansas transit data and past transit trends. FTA's Simplified Trips on Transit Software (STOPS) modeling or regional modeling will be required for the application.



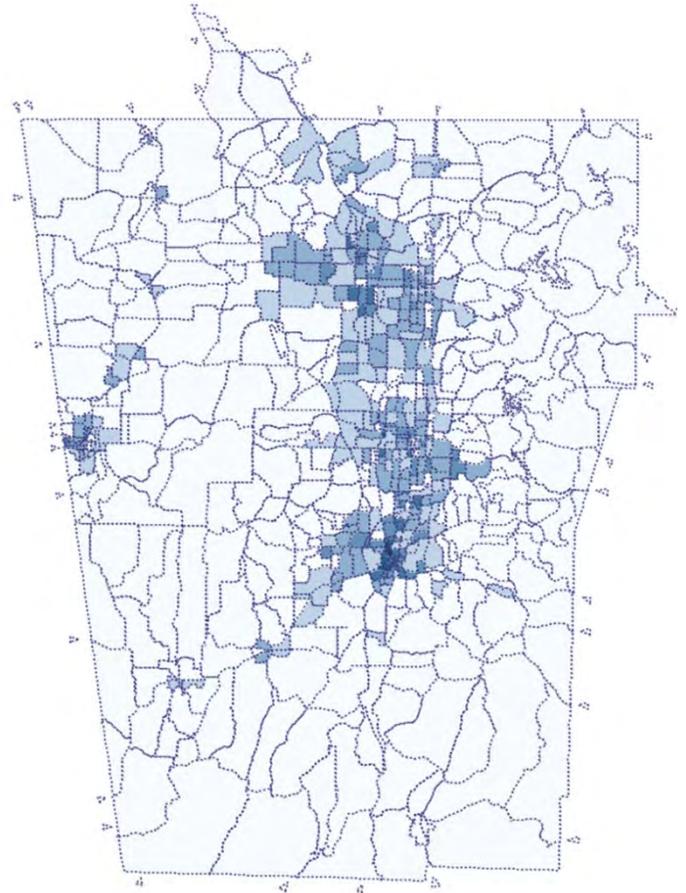
Map 7-5 - I-49 10-Mile Buffer and NWA Travel Forecasting Model TAZs



Map 7.6 - 2045 Total Volume Map – NWA Travel Forecasting Model



Household Density by TAZ - 2018

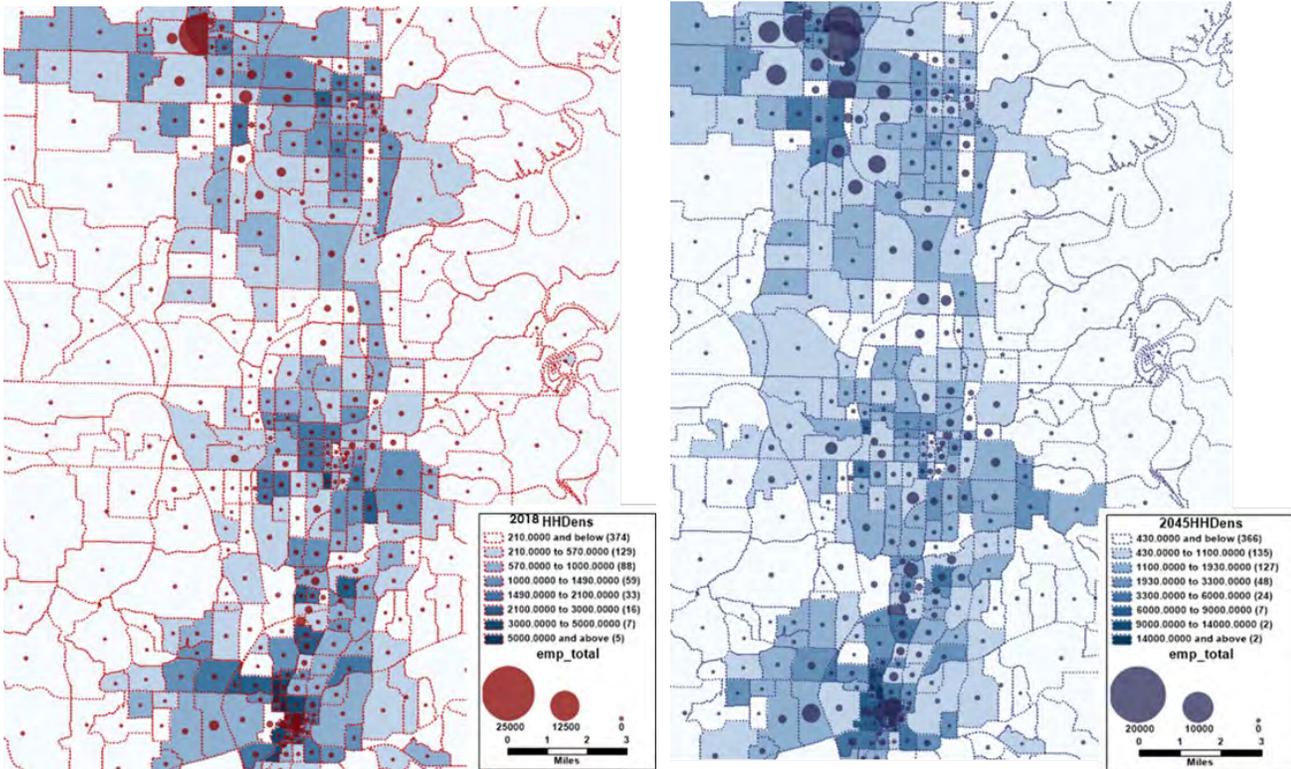


Household Density by TAZ - 2045

Map 7-7 – 2018 TAZs Household Density Distribution in 2018 and NWARPC 2045 NWARPC Projected Household Density Distribution

Table 7-12 and 7-13 and Figure 7-17 below illustrate actual Level of Service, Annual Average Daily Counts, model results from the 2006 I-540 Study and forecasted 2045 Travel Demand Model volumes. Note that in both tables and figure below, the forecasted 2045 volumes are calculated at the best available location to match the actual ADT data, therefore some inconsistencies may occur. A generalized description of the Level of Service thresholds published by the Utah Department of Transportation is illustrated in Figure 7-18.

The recently updated travel demand model also includes a post-processing tool that builds LOS maps on the fly as the model scenarios are produced. This tool will be utilized by transportation planners and engineers to identify traffic volume bottleneck areas and for a variety of scenarios for future years. An example of the maps produced by this post-processing is illustrated in Map- 7-9.



Map 7-8 – 2018 TAZs Employment Density Distribution and NWARPC 2045 NWARPC projected Employment Density

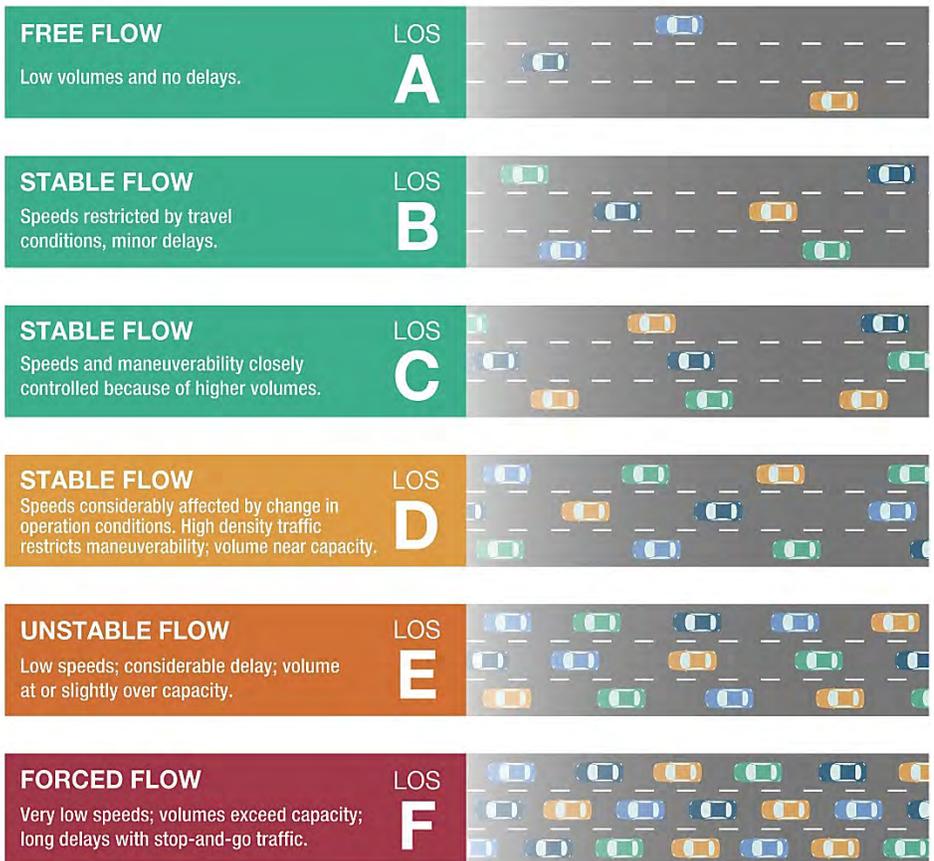


Figure 7-18 – Levels of Service (LOS) – Source: Utah Department of Transportation (UDOT) at https://www.parleysis.com/assets/images/Parleys%20LOS%20Levels_rev2.png

Interstate 49 Levels of Service (LOS) for Washington and Benton County 2006 Study)

	Traffic Volumes 2004	LOS (4 Lanes) 2004	Traffic Volumes 2024 (2006 Data)	LOS (4 Lanes) 2024 (2006 Data)	LOS (6 Lanes) 2024 (I-49 in now Constructed to Six Lanes)	LOS (8 Lanes) 2024
1-49 LOCATION						
Exit 45 Hwy 74	14,600	A	26,400	B	A	A
Exit 53 Hwy 170	18,700	A	33,800	C	B	A
Exit 58 W. Wilson St.	20,200	B	36,600	C	B	A
Exit 61 Hwy 265/ Hwy 112	27,300	B	49,300	D	C	B
Exit 62 Hwy 62 / Hwy 180	44,000	C	79,500	F	D	C
Exit 64 Hwy 16 / Hwy 112 Spur	51,800	D	93,600	F	E	C
Exit 65 N. Porter Rd.	54,000	D	97,500	F	E	C
Exit 66 Hwy 112	60,700	D	109,600	F	F	D
Exit 67 Hwy 71 Business	48,800	D	88,100	F	D	C
Exit 69 Great House Springs Rd.	50,200	D	92,400	F	E	C
Exit 72 Hwy 412	49,700	D	93,300	F	E	D
Exit 73 Elm Springs Rd.	55,800	D	106,800	F	F	D
Exit 76 E. Wagon Wheel Rd.	55,400	D	108,100	F	F	D
Exit 77 Proposed Hwy 412	55,400	D	110,000	F	F	D
Exit 78 Hwy 264	51,100	D	101,700	F	E	C
Exit 81 Pleasant Grove Rd.	52,100	D	103,700	F	E	D
Exit 82 Proposed W. Perry Rd.	52,100	D	101,500	F	E	C
Exit 83 Hwy 94	51,700	D	100,900	F	E	C
Exit 85 Hwy 71 Business	46,200	C	91,900	F	D	C
Exit 86 Hwy 102 / Hwy 62	33,900	B	68,800	E	C	B
Exit 88 Hwy 71 / Hwy 72	26,900	B	54,600	D	B	B

<https://www.nwarpc.org/pdf/Congestion%20Management/1-11-105%20I-540%20Improvement%20Study%20AHTD%202006.pdf>

Table 7-12: I-49 Levels of Service in Year 2024 (2006 I-540 Improvement Study)

1-49 LOCATION	ARDOT 2004 ADT Counts	ARDOT 2019 ADT Counts	Projected Traffic Volumes 2024 (2006 I-540 Study)	Projected Traffic Volumes 2045 NWA Travel Demand Forecast Model	LOS (6 Lanes) 2045 based on Simplified Highway Capacity Calculation Method	Percent Change 2004 to 2019 ARDOT Counts	Percent Change 2019 to 2045 ARDOT Counts to Projected
Exit 45 Hwy 74	14,600	21,000	26,400	15,300	A	43.84%	-27.14%
Exit 53 Hwy 170	18,700	24,000	33,800	27,700	B	28.34%	15.42%
Exit 58 W. Wilson St.	20,200	32,000	36,600	38,000	B	58.42%	18.75%
Exit 61 Hwy 265/ Hwy 112	27,300	41,000	49,300	52,700	B	50.18%	28.54%
Exit 62 Hwy 62 / Hwy 180	44,000	59,000	79,500	86,700	E	34.09%	46.95%
Exit 64 Hwy 16 / Hwy 112	51,800	67,000	93,600	115,900	E	29.34%	72.99%
Exit 65 N. Porter Rd.	54,000	71,000	97,500	120,000	F	31.48%	69.01%
Exit 66 Hwy 112	60,700	88,000	109,600	101,100	E	44.98%	14.89%
Exit 67 Hwy 71 Business	48,800	68,000	88,100	126,800	F	39.34%	86.47%
Exit 69 Great House Springs	50,200	87,000	92,400	146,600	F	73.31%	68.51%
Exit 72 Hwy 412	49,700	67,000	93,300	137,900	F	34.81%	105.82%
Exit 73 Elm Springs Rd.	55,800	95,000	106,800	134,500	F	70.25%	41.58%
Exit 76 E. Wagon Wheel Rd.	55,400	95,000	108,100	134,500	F	71.48%	41.58%
Exit 77 Hwy 412 Bypass	55,400	79,000	110,000	120,200	F	42.60%	52.15%
Exit 78 Hwy 264	51,100	79,000	101,700	144,400	F	54.60%	82.78%
Exit 81 Pleasant Grove Rd.	52,100	79,000	103,700	161,800	F	51.63%	104.81%
Exit 82 Promenade Blvd.	52,100	82,000	101,500	167,700	F	57.39%	104.51%
Exit 83 Hwy 94	51,700	82,000	100,900	179,500	F	58.61%	118.90%
Exit 85 Hwy 71 Business	46,200	76,000	91,900	160,400	F	64.50%	111.05%
Exit 86 Hwy 102 / Hwy 62	33,900	55,000	68,800	98,900	D	62.24%	79.82%
Exit 88 Hwy 71 / Hwy 72	26,900	43,000	54,600	82,000	C	59.85%	90.70%

Simplified Highway Capacity Calculation Method for the Highway Performance Monitoring System

Table 7-13: I-49 Levels of Service in Year 2045

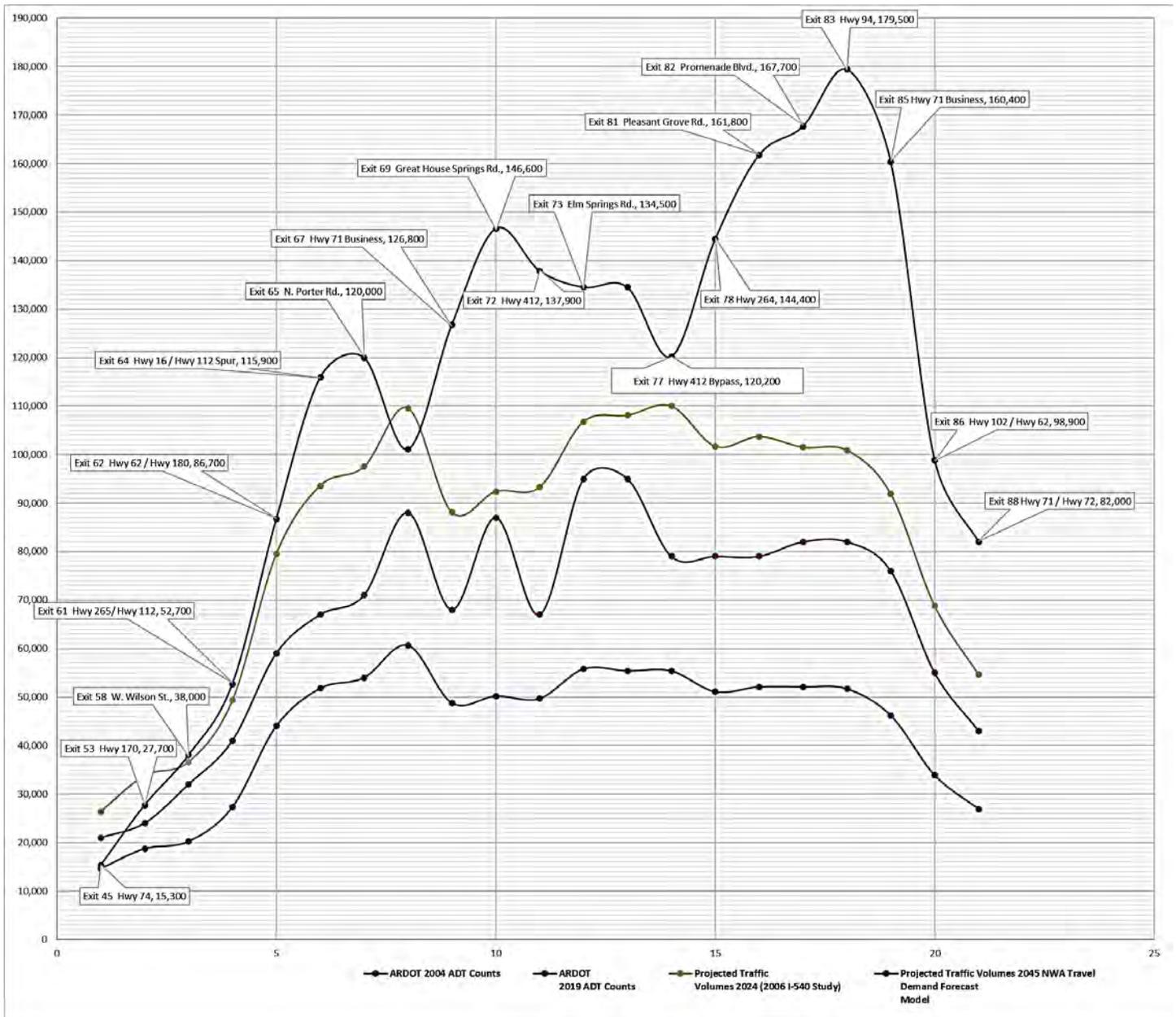
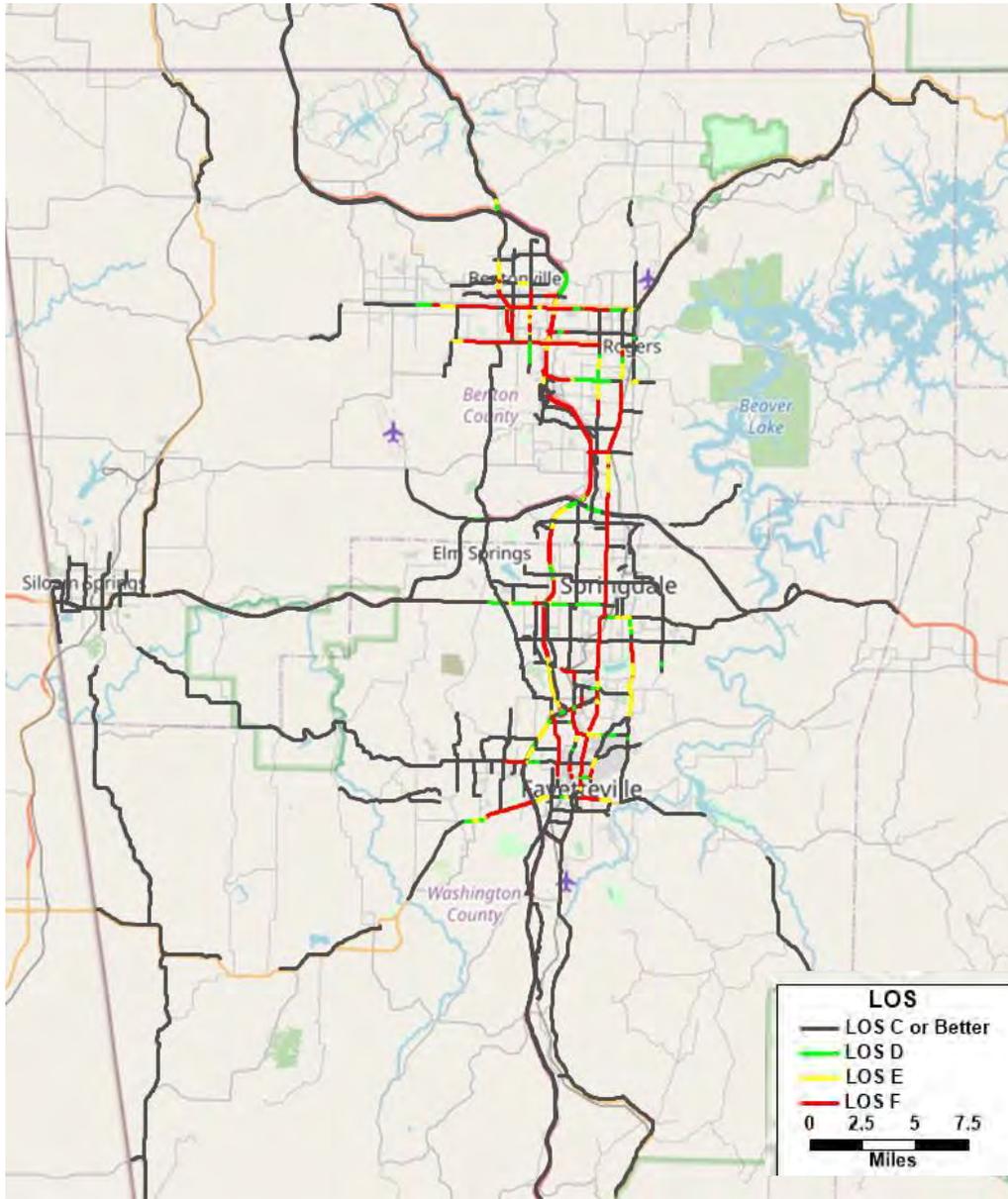


Figure 7-17: I-49 Selected Exit Locations – Average Daily Counts and Projected Volumes



Map 7-9-: 2045 Fiscally Constrained Model Scenario – Level of Service (LOS) Map



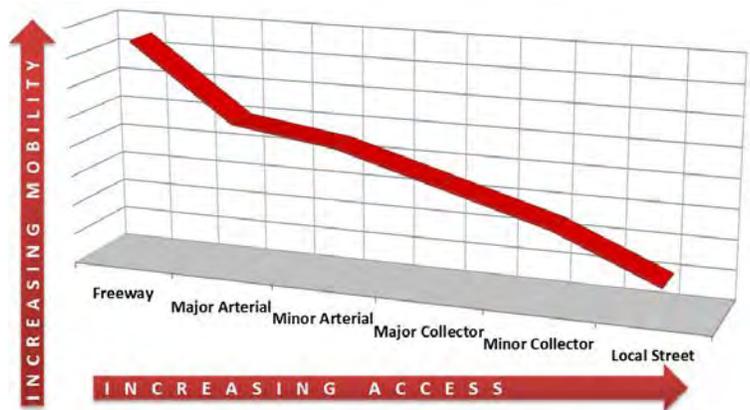
CHAPTER 8. FACILITY DESIGN, MANAGEMENT AND OPERATIONS, AND SYSTEM PERFORMANCE

TRANSPORTATION DESIGN

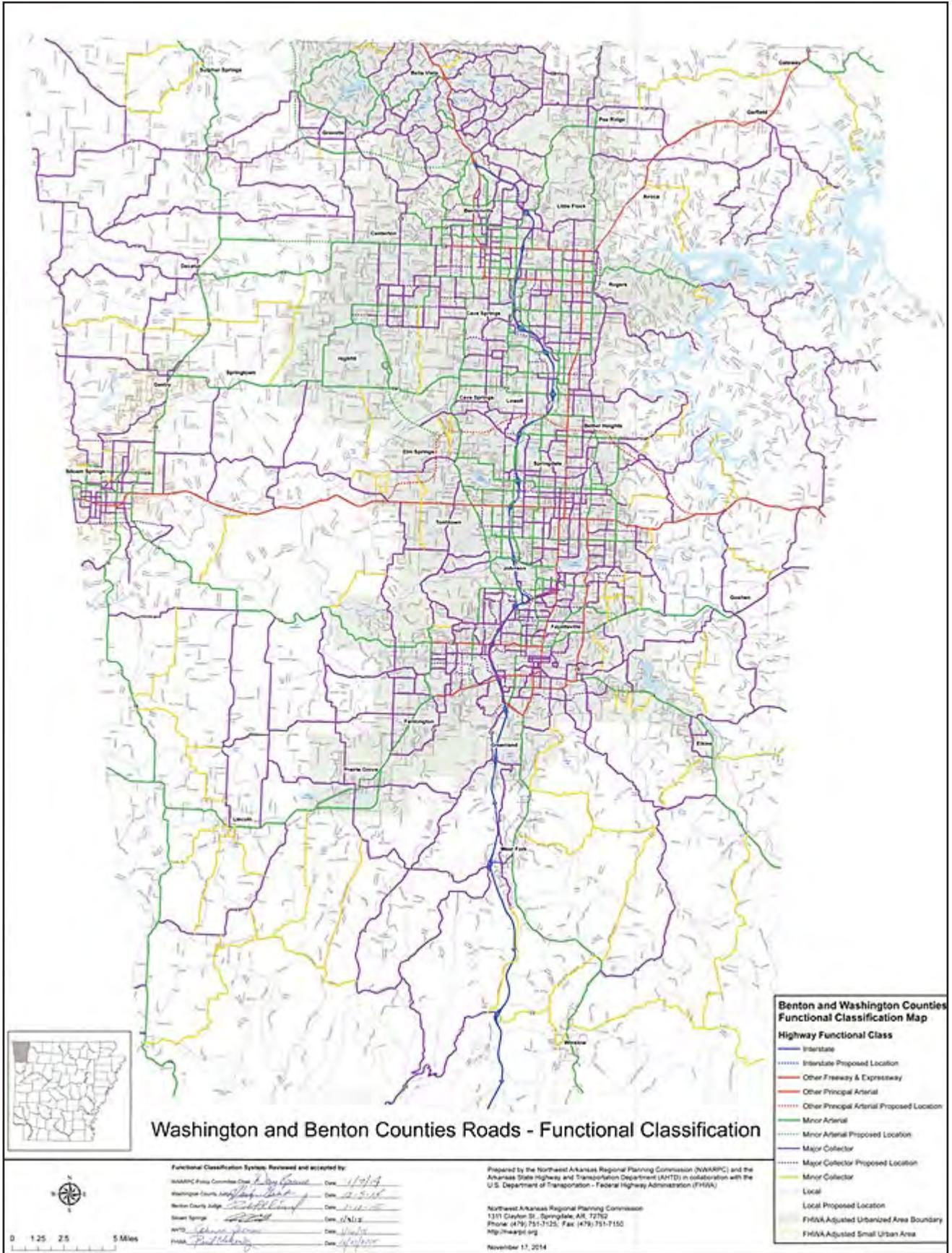
Roadway facilities are classified as Freeway/Expressways, Major Arterials, Minor Arterials, Major Collectors, Minor Collectors and Local Streets. These classifications reflect the utility of the various facilities as illustrated below, with the higher classifications more responsible for moving traffic long distances while the lower functional classes are primarily responsible for access to land. It is necessary for roadways to be on the State’s functionally classified system to qualify for State and Federal funding. Map 8.1 on the next page shows the functionally classified system.

Of particular importance to the rapidly growing area of Northwest Arkansas is adequate protection of right of way and setbacks adjacent to current and proposed roads. A primary tool for this protection is the adopted master street plan of the cities and road plan of the counties.

The area’s cities and counties are urged to consider the existing functionally classified system as well as the proposed 2045 network to protect the necessary rights-of-way through their adopted plan and ordinances.



It should also be noted that the cross-section designs in the 2045 MTP reflect recommended designs and that some areas of commercial or industrial development will require cross-section designs higher than the typical cross-section of the designated functional class of the roadway. Cities should identify those areas and preserve the necessary right-of-way for the higher design.



Map 8.1 - Washington and Benton Counties Functionally Classified Roads

COMPLETE STREETS

“Complete Streets” involves designing streets not just for the automobile but for all users of all ages and abilities. Generally, the elements that make up a complete street, according to the National Complete Streets Coalition, are sidewalks, bicycle lanes, shared-use paths, designated bus lanes, safe and accessible transit stops, and frequent and safe crossings for pedestrians, including median islands, accessible pedestrian signals, and curb extensions. There is no one design for complete streets since different areas have different road uses. However, all complete street designs should balance safety and convenience for everyone using the street.

The MTP recommends the development and adoption of Complete Streets policies. Complete Streets policies direct transportation planners and engineers to consistently design the right-of-way to accommodate all users – drivers, transit riders, pedestrians, and bicyclists, as well as for older people, children, and people with disabilities. Complete streets provide a safer and more accessible transportation system for all users.

The MTP identifies a series of cross-sections as a guide to implement complete streets concepts as transportation facilities are designed. The illustrations demonstrate how complete street design elements may be incorporated as part of the design process. The complete street cross-sections illustrated in the MTP are based on the following National Complete Street policy, guidance, and resources:

National Complete Streets Coalition:

<http://www.smartgrowthamerica.org/complete-streets>

NACTO Urban Street Design Guide:

<http://nacto.org/usdg/>

ITE - Designing Walkable Urban Thoroughfares: A Context Sensitive Approach:

<https://www.ite.org/pub/?id=E1CFF43C-2354-D714-51D9-D82B39D4DBAD>

Jurisdictions are also encouraged to implement complete streets policies. These policies are also included in the adopted Northwest Arkansas Regional Bicycle and Pedestrian Master Plan. In addition to the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan, 25 individual community plans have been developed and adopted along with recommended complete streets catalyst projects. All jurisdictions making major improvements to roads shown in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan should make every effort to include bicycle and pedestrian facilities. The following sample resolution has been developed to encourage complete streets throughout the region.



Images: Ruppel Road, Fayetteville AR

Sample Complete Streets Resolution for NWA Communities:

WHEREAS Complete Streets are important for our community’s economy, health, mobility, and quality of life for residents, businesses and visitors,

LET IT BE RESOLVED that [Municipality / Adopting body] hereby recognizes the importance of creating Complete Streets that enable safe travel by all users, including pedestrians, bicyclists, transit riders and motorists, and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities.

BE IT FURTHER RESOLVED that [Municipality / Adopting body] affirms that Complete Streets infrastructure addressing the needs of all users can be incorporated into all planning, design, approval, and implementation processes for construction, reconstruction, retrofit, maintenance, alteration, or repair of streets, bridges, or other portions of the transportation network; provided, however, that such infrastructure may be excluded, upon written approval by [insert senior manager, such as City Manager or the head of an appropriate agency], where documentation and data indicate that: 1. Use by non-motorized users is prohibited by law; 2. The cost would be excessively disproportionate to the need or probable future use over the long term; 3. There is an absence of current or future need; or 4. Inclusion of such infrastructure would be unreasonable or inappropriate in light of the scope of the project.

BE IT FURTHER RESOLVED that the head of each affected agency or department should report back to the [Adopting body] [annually / within one year of the date of passage of this resolution] regarding: the steps taken to implement this Resolution; additional steps planned; and any desired actions that would need to be taken by [Adopting body] or other agencies or departments to implement the steps taken or planned.

BE IT FURTHER RESOLVED that a committee is hereby created, to be composed of [insert desired committee composition] and appointed by [the Mayor / President of adopting body / other], to recommend short-term and long-term steps, planning, and policy adoption necessary to create a comprehensive and integrated transportation network serving the needs of all users; to assess potential obstacles to implementing Complete Streets in [Municipality]; and to suggest revisions to the [insert name of Municipality’s comprehensive plan equivalent], zoning code, subdivision code, and other applicable law.

The following COMPLETE STREET cross-sections have been developed as a guide:

MINOR STREET

Description

Provides access to properties within a neighborhood or district. Not intended for long-distance auto trips.

Conforms to Minor Street dimensions of 30 feet from curb-to-curb.

- Minor streets generally require no lane markings.
- Minor streets can be further optimized for bicycle travel by applying bicycle boulevard treatments (described in these design guidelines in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan).
- Parking may be permitted or prohibited based on demand and adjacent land use.



COLLECTOR STREET

Description

Provides traffic circulation within neighborhoods, commercial and industrial areas. Collects traffic from local streets in neighborhoods and channels it into the arterial system.

Conforms to Collector Street dimensions of 40 feet from curb-to-curb.

Function

- Connections between arterials should be indirect in order to discourage use by traffic from outside the neighborhood.
- Design Service Volume: 4,000 vpd; 6,000 vpd with left turn bays
- Speed: 25-30 mph



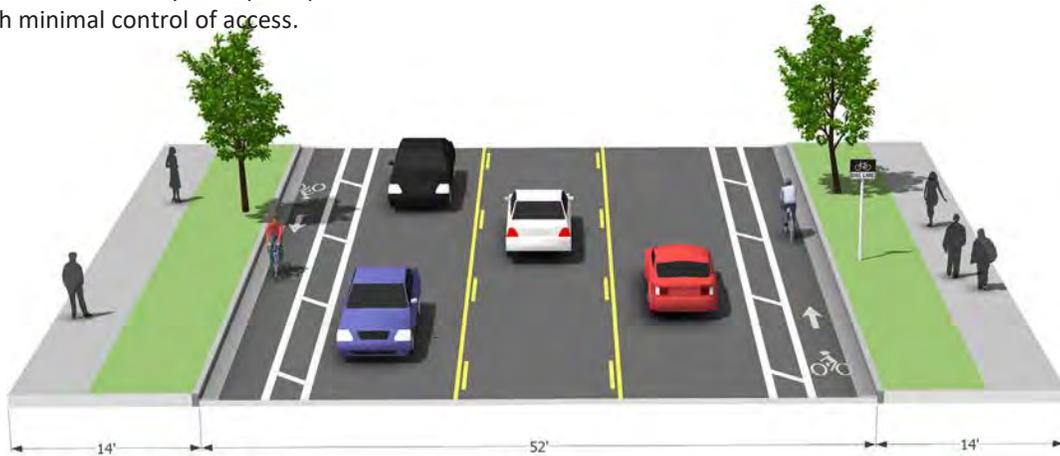
MINOR ARTERIAL

Function

Connects higher functional class facilities, activity centers, regions of the area, and major county roads at the edge of the metropolitan area. Traffic is composed predominantly of trips across and within regions of the city.

- Ideally does not penetrate neighborhoods.
- Design Service Volume: 12,200 vpd; 14,800 vpd with left turn bays
- Speed: 35-40 mph

Provides service to traffic at a somewhat lower level of travel mobility than principal arterials with minimal control of access.



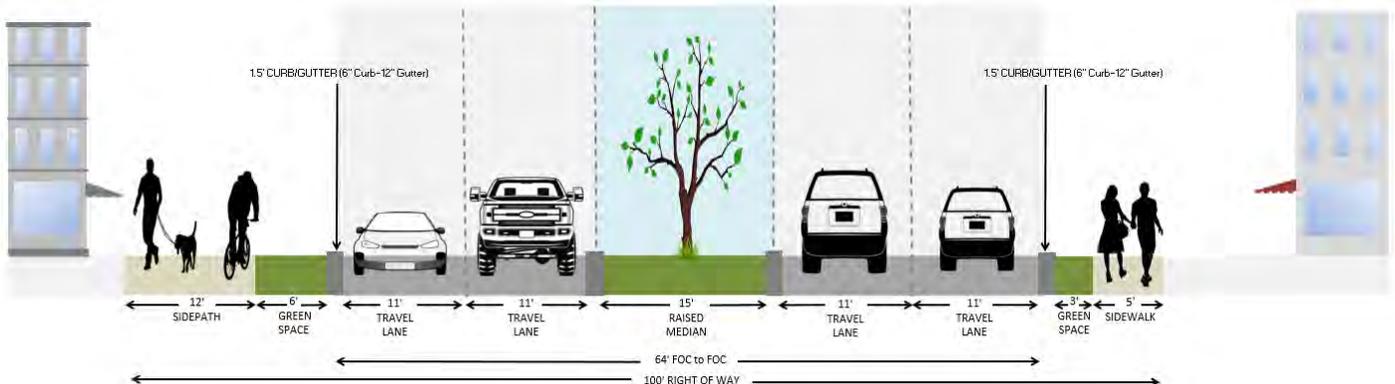
MAJOR ARTERIAL

Function

Connects freeway/expressways, rural highways at the edge of the metropolitan area, and major urban activity centers within the metropolitan area. Traffic is composed predominantly of traffic across or through the city.

- Design Service Volume: 17,600 vpd – 20,600 vpd with left turn lane
- Speed: 40-45 mph

Access may be controlled through medians or by the limitation of curb cuts through the orientation of access for new developments, especially residential subdivisions, to intersection cross streets.

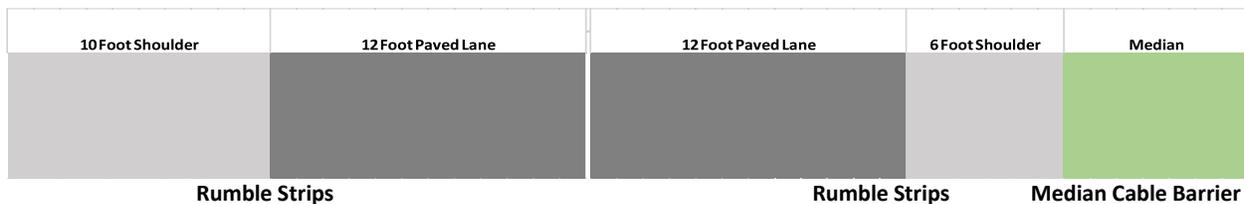


FREEWAY/EXPRESSWAY

Function

High speed, multi-lane facilities with a high degree of access control. These facilities serve the major centers of activity of the metropolitan area and are well integrated with the urban arterials and major rural arterials routes entering the region. They should provide a high level of traffic service to travelers who do not have local destinations and wish to bypass the city.

- Design Service Volume: 28,300 vpd expressway; 44,800 vpd freeways
- Speed: 55-70 MPH
- Lanes: Four or more 12-foot lanes; 10-foot outside shoulders and 6-foot inside shoulders
- Median: Either acceptable depressed median or raised median with safety barrier



ARDOT POLICY REGARDING BICYCLE LANES AND SIDEWALKS

The ARDOT Policy regarding sidewalks calls for five-foot sidewalks with a three-foot buffer between the roadway and the sidewalk. Any State Highway project with wider sidewalks or buffer zones will have a cost share requirement from the local jurisdiction. ARDOT Policy regarding bike lanes indicates that they will be considered if the facility is on an adopted master trail plan. From the ARDOT Policy:

- When bicycle accommodations are to be made on routes with an open shoulder section, the paved shoulder will be used to accommodate bicycles. Shoulder widths shall conform to the widths recommended in the American Association of State Highway and Transportation Officials (AASHTO) “A Policy on Geometric Design of Highways and Streets” 6th Edition, 2011.
- When bicycle accommodations are to be made on routes with a curb and gutter section, the bicycle lane will be in accordance with recommendations in the AASHTO Guide for the Development of Bicycle Facilities. Generally, a bicycle lane width of four feet (measured from the lane edge to the edge of the gutter) will be considered.
- If local or regional design standards specify bicycle facility widths greater than the standards noted above, the additional right-of-way and construction costs associated with the greater width shall be funded by the local jurisdiction that adopted the higher design standards.

The complete ARDOT Policy for Pedestrian and Bicycle Facilities can be found at http://www.arkansashighways.com/planning_research/statewide_planning/bicycle_pedestrian_planning/AR%20bike%20ped%20policy.pdf.

The MTP recommends that all roads (ARDOT and local) crossing named waterways prominently display a sign naming the waterway.

MTP recommends following AASHTO, NACTO, MUTCD, FHWA Bikeway Selection Guide and best practices for Active Transportation Facilities.

ACCESS MANAGEMENT

Access Management provides an important means of maintaining mobility, improving safety and system reliability. It calls for effective ingress and egress to a facility, efficient spacing and design to preserve the functional integrity and overall operational viability of street and road systems. Good access management promotes safe and efficient use of the transportation network.

NWARPC has worked toward development of regional policies and a Model Access Management Ordinance. The Model Access Management Ordinance is available to local governments to use and tailor to their unique and specific needs and situations. Please see the [Access Management Model Ordinance](#).

Access Management should address, among other things, the following areas:

- **Facility hierarchy**
- **Intersection and interchange spacing**
- **Driveway spacing**
- **Traffic signal spacing**
- **Median treatments and median openings**
- **Turning lanes and auxiliary lanes**
- **Street connections**



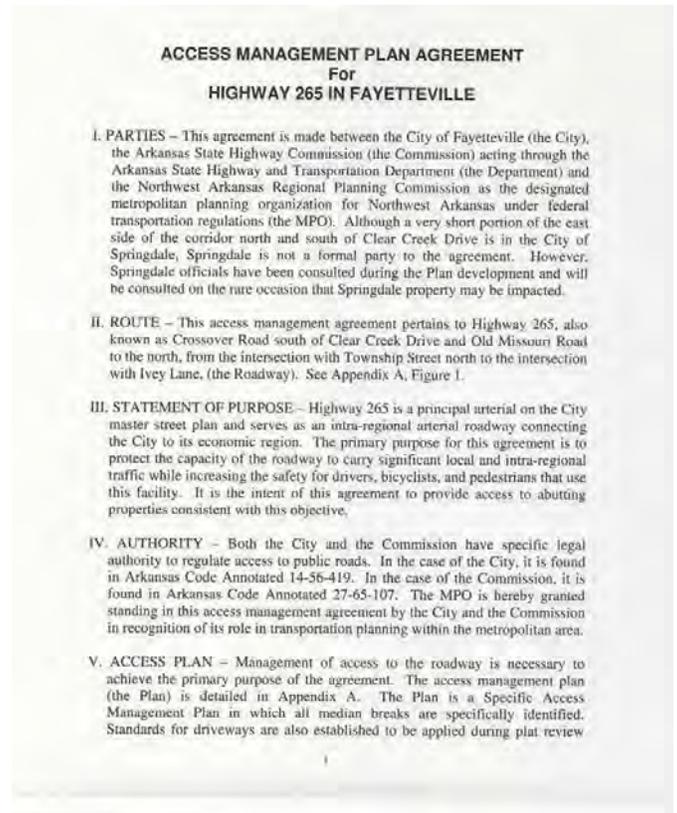
Highway 265, Fayetteville AR

In areas of rapid land development, it is important for jurisdictions to develop access standards that achieve a balance between property access and functional integrity of the road system. Studies show that implementing access management provides three major benefits to transportation systems:

- Increased roadway capacity
- Reduced crashes
- Shortened travel time for motorists

Effective access management will accomplish the following:

- 1) Limit the number of conflict points at driveway locations. Conflict points are indicators of the potential for accidents. The more conflict points that occur at an intersection, the higher is the potential for vehicular crashes. When left turns and cross street through movements are restricted, the number of conflict points is significantly reduced.



- 2) Separate conflict areas. Intersections created by streets and driveways represent basic conflict areas. Adequate spacing between intersections allows drivers to react to one intersection at a time and reduces the potential for conflicts.
- 3) Reduce interference for through traffic. Through traffic often needs to slow down for vehicles exiting, entering, or turning across the roadway. Providing turning lanes, designing driveways with appropriate turning radii, and restricting turning movements in and out of driveways allows turning traffic to get out of the way of through traffic.
- 4) Provide sufficient spacing for at-grade, signalized intersections. Good spacing of signalized intersections reduces conflict areas and increases the potential for smooth traffic progression.
- 5) Provide adequate on-site circulation and storage. The design of good internal vehicle circulation in parking areas and on local streets reduces the number of driveways that businesses need for access to the major roadway.

Access Management encompasses a set of techniques that state and local governments can use to control access to highways, major arterials, and other roadways. The FHWA lists the following techniques:

- Access Spacing: Increasing the distance between traffic signals improves the flow of traffic on major arterials, reduces congestion, and improves air quality for heavily traveled corridors.
- Driveway Spacing: Fewer driveways spaced further apart allow for more orderly merging of traffic and present fewer challenges to drivers.
- Safe Turning Lanes: Dedicated left and right-turn, indirect left-turns and U-turns, and roundabouts keep through traffic flowing. Roundabouts represent an opportunity to reduce an intersection with many conflict points or a severe crash history (T-bone crashes) to one that operates with fewer conflict points and less severe crashes (sideswipes) if they occur.
- Median Treatments: Two-way left-turn lanes (TWLTL) and non-traversable, raised medians are examples of some of the most effective means to regulate access and reduce crashes.
- Right-of-Way Management: As it pertains to right-of-way reservation for future widening, good sight distance, access location, and other access-related issues.

REGIONAL ACCESS MANAGEMENT POLICIES AND OBJECTIVES

Regional Policy:

The MTP recommends that local jurisdictions, ARDOT and MoDOT implement access management techniques and plans as transportation facilities are planned, programmed, and constructed.

Regional Objectives:

- Coordinate with ARDOT and MoDOT.
- Protect the capacity of the roadway to carry significant local and regional traffic while increasing the safety for drivers, bicyclists, and pedestrians that use the facility.
- Maximize safety and capacity of the corridor in light of possible future development and/or redevelopment.
- Provide a mechanism to balance national, State, regional, and local interests in a manner that protects the function of the roadway as well as the existing and future investments in it, along with allowing reasonable economic development opportunities.
- Improve the environment for pedestrians, bicycles, and motor vehicles by reducing and consolidating driveway conflict points.
- Effective local access management requires planning as well as regulatory solutions. Where applicable, communities should establish a policy framework that supports access management in the local comprehensive plan, prepare corridor or access management plans for specific problem areas, and encourage good site planning techniques. Local comprehensive plans should establish how the community would balance mobility with access, identify the desired access management approach, and designate corridors that will receive special treatment. This may be supplemented through functional plans, such as an access management or thoroughfare plan, or through sub area plans, such as an interchange or corridor plan. By establishing the relationship between regulatory strategies and public health, safety, and welfare, the comprehensive plan can serve as the legal basis for access controls.

- Remedial access management techniques are recommended for areas that are already developed. Remedial access management focuses on reducing congestion, improving safety and improving aesthetic conditions on arterials that have developed into the familiar strip pattern with numerous separated driveways.
 - » Closing or consolidating driveways, sharing driveways, improving on-site circulation, linking adjoining parking lots, and constructing parallel access roads are common access management techniques applied in existing developed areas.
 - » Remedial access management efforts can be accomplished through alternative driveway design and applied during site plan review for a parcel as it goes through the permitting process for changes in use, expansion, etc.
 - » Another effective time to implement remedial access management techniques is when new roadway improvements are being made.

ARDOT/Local Jurisdiction Individual Corridor Access Management Plans on State Numbered Highways:

- Individual Access Management plans will specifically identify all median breaks.
- Establish standards for driveways to be applied during plat review prior to development approval by the local jurisdiction.
- Access Management Plan Agreement - Each Access Management Plan Agreement will be deemed adopted when passed in identical form by the local jurisdiction, the NWARPC acting in its capacity as MPO, and the Arkansas State Highway Commission (when the Plan applies to a State Highway).
- The Access Management Plan agreement may be terminated or modified, in whole or in part only by mutual agreement of all of the parties as evidenced by resolutions adopted by each governing body.
- Amending the Access Management Plan – An Access Management Plan amendment (variance) will be considered at the request of any of the parties to the Agreement or at the request of an applicant whose permit request has been denied by any of the parties. The proposed amendment must be adopted in identical form by the local jurisdiction, the NWARPC, and Arkansas State Highway Commission to become effective. The Access Management Plan will be updated immediately after construction of each widened portion of the roadway is completed to reflect any changes to driveway location due to that construction if necessary.

Access Management Model Ordinance

Local government adoption of implementing regulations, standards and procedures is critical to an effective regional access management effort. Without local government enforcement of implementing regulations, the regional access management effort may be undermined by inconsistent decisions during the development review and permitting process. The MTP includes an Access Management Model Ordinance whose purpose is not to identify specific projects, rather, it is to establish guidelines that will promote safe and efficient traffic flow and which will enhance and sustain economic development along the corridor over which it is laid. It is understood that the Model Ordinance may be amended or tailored to suit each local jurisdiction's individual needs. The Access Management Model Ordinance may be found [at this link](#).

CONTEXT SENSITIVE SOLUTIONS

Context Sensitive Solutions (CSS), previously known as Context Sensitive Design, is another “alternative approach” to transportation development that has shown very promising results throughout the country. By resolving design issues in the beginning of a transportation project much time and money can be saved. The FHWA defines CSS as: “a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions.” [For more information go to this link](#).

The process differs from traditional processes in that it considers a range of goals that extends beyond the transportation problem. It includes goals related to community livability and sustainability, and seeks to identify and evaluate diverse objectives earlier in the process and with greater participation by those affected. The result is greater consensus

and a streamlined project during later stages of project development and delivery. And although CSS processes are often associated with design, the approach is most effective when used during each step of planning and project development – from long-range transportation plans to individual corridor strategies.

While every project has unique circumstances, all CSS processes should build consensus around these issues before solutions are identified:

- Project context, including geography and community values.
- Problem to be addressed.
- Implementation plan and decision-making process and roles.
- Vision, goals, and evaluation factors.

Once stakeholders agree on these, the team can begin to identify and evaluate alternatives and make decisions. The steps for building agreement are flexible and can be adapted to suit individual projects. At the heart of the approach is the methodical integration of diverse values at each step of the process.

Figure 8.1 illustrates a CSS process that becomes less contentious as the design becomes more complex. Public and stakeholder involvement might be a primary activity early in the project, but by the time engineers are producing detailed plans, stakeholders only wish to be kept informed about progress and involved when changes arise. This front-loaded community participation and decision-making process allows stakeholders to influence outcomes by raising issues early when they can still be addressed.



Figure 8.1 - CSS Process Characteristics of the CSS Products or Design:

- The project is in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area.
- The project is a safe facility for all users and the community.
- The project solves problems and satisfies the purpose and needs identified by a full range of stakeholders.
- The project exceeds the expectations of both designers and stakeholders and is perceived as adding lasting value to the community as a whole.
- The project involves efficient and effective use of resources (time, budget) of all involved parties.



These before and after photos from the College Ave/Hwy. 71B (Fayetteville, Arkansas) illustrate how context sensitive projects improve safety and mobility for a variety of users. The photo illustrates improved sidewalks, street trees, and tree-lined boulevard.

CSS projects consider new and emerging technologies, funding sources, and public policy issues aimed at addressing major drivers such as energy supply, climate change, and sustainability initiatives. CSS projects also address livability issues such as bicycle and pedestrian facilities, transit, and multimodal connections. Additionally, CSS projects embrace sustainability principles such as stormwater management, water quality, and the use of recycled materials throughout their lifecycles.

Given the potential of avoiding transportation project delays and costs, and at the same time meeting the needs of interested individuals and stakeholders, the CSS process would be an important alternative approach for the Northwest Arkansas region to consider adopting into the planning process.

REGIONAL TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS (TSMO)

Transportation Systems Management and Operations (TSMO) is a set of strategies that focus on operational improvements that can maintain and even restore the performance of the existing transportation system before extra capacity is needed. The goal here is to get the most performance out of the transportation facilities already in place. This requires knowledge, skills, and techniques to administer comprehensive solutions that can be quickly implemented at relatively low cost. This may enable transportation agencies to “stretch” their funding to benefit more areas and customers. TSMO also helps agencies balance supply and demand and provide flexible solutions to match changing conditions. MAP-21, SECTION 1103 (a) (30) (A) defines TSMO as “an integrated set of strategies to optimize the performance of existing infrastructure through the implementation of multimodal and intermodal, cross-jurisdictional systems, services, and projects designed to preserve capacity and improve security, safety, and reliability of the transportation system”.

The benefits to TSMO can include:

- Improved quality of life
- Smoother and more reliable traffic flow
- Improved safety
- Reduced congestion
- Less wasted fuel
- Cleaner air
- Increased economic vitality
- More efficient use of resources (facilities, funding)

TSMO looks at performance from a systems perspective, not just one strategy, project or corridor. This means that these strategies are coordinated with others across multiple jurisdictions, agencies, and modes. Integration views the surface transportation network as a unified whole, making the various transportation modes and facilities work together and ultimately perform better. TSMO not only provides public agencies with a growing toolbox of individual solutions but encourages combining them to achieve greater performance on the entire system. Integration can happen on multiple levels:

- **System** – Implementing and combining strategies as a corridor or region matures in needs.
- **Technical** – Developing a framework used to support information sharing between technology deployed on the system.
- **Cultural** – Developing a workforce that values and prioritizes the use of TSMO solutions across multiple disciplines.
- **Operational** – Coordinating day-to-day operational strategies so that corridor, region, or system-wide objectives are achieved.
- **Institutional** – Incorporating TSMO policies and processes into an agency's normal way of doing business. This step includes TSMO integration with various disciplines, such as planning, program management and design, to support long-term goals for the transportation system. This can be applied both internally and externally.

TSMO includes efforts to operate the multimodal transportation system and activities to manage travel demand, thus crossing over political, modal, and jurisdictional boundaries. TSMO expands beyond just roads. It emphasizes the door-to-door experience, regardless of the modes of travel. TSMO requires agencies to look beyond a project or a corridor and consider the impacts of the entire transportation system. This involves coordination and collaboration among multiple stakeholders, such as federal, state, and local agencies, the first responder community, and the private sector to achieve seamless interoperability.

TSMO Strategies and Solutions

Below is a list of examples of TSMO strategies. These are not all inclusive:

- Work Zone Management
- Traffic Incident Management
- Special Event Management
- Road Weather Management
- Transit Management
- Freight Management
- Traffic Signal Coordination
- Traveler Information
- Ramp Management
- Congestion Pricing
- Active Transportation and Demand Management
- Integrated Corridor Management
- Access Management
- Improved Bicycle and Pedestrian Crossings
- Connected and Automated Vehicle Deployment



Many agencies are already doing some of these activities. In addition, many of them specifically address congestion due to non-recurring events in addition to daily rush hour traffic. TSMO addresses both types of congestion and brings the strategies together to maximize the safety, mobility and reliability of the transportation system. Many of them require coordination across multiple jurisdictions and modes. While each individual strategy can be beneficial, TSMO means they are applied with consideration of the entire transportation, not just one specific location. Many of these strategies can be applied to urban, suburban, and rural environments.

In August 2020, NWARPC and ARDOT signed an agreement to develop a TSMO plan for NWARPC. Once the Plan is complete the MTP will be amended to include it. Along with the TSMO Plan the 2007 Intelligent Transportation System Plan will be updated and the 2015 Congestion Management Process will be updated.

BETWEEN
 THE NORTHWEST ARKANSAS REGIONAL PLANNING COMMISSION
 AND
 THE ARKANSAS DEPARTMENT OF TRANSPORTATION
 In Cooperation with the
 U.S. Department of Transportation, Federal Highway Administration
 RELATIVE TO
 Development of a **Regional Transportation Systems Management and Operations (TSMO) Plan and Intelligent Transportation Systems (ITS) Architecture Update** for Northwest Arkansas (hereinafter called the "Project").

WHEREAS, TSMO strategies utilize ITS to maximize the efficiency of system operations; and

WHEREAS, ITS architectures are required by the Federal Highway Administration (FHWA) in order to utilize federal funding on ITS projects; and

WHEREAS, the Northwest Arkansas regional ITS architecture, developed by the Northwest Arkansas Regional Planning Commission (hereinafter called the "NWARPC") and the Arkansas Department of Transportation (hereinafter called the "Department") in partnership, was completed in 2007; and

WHEREAS, the NWARPC has proposed a partnering arrangement with the Department to fund a regional TSMO plan and ITS architecture update; and

WHEREAS, the Department recognizes the benefits of collaborating with local and regional jurisdictions to preserve and maximize highway investments utilizing TSMO and ITS; and

WHEREAS, the Department is currently in the process of hiring a consulting firm to prepare a statewide TSMO plan and it has been determined that a regional TSMO plan and ITS architecture update for Northwest Arkansas may be accomplished utilizing the same consulting firm; and

WHEREAS, Arkansas State Highway Commission Minute Order 2020-041 authorized the Director to enter into any necessary agreements with NWARPC for the Project; and

WHEREAS, the NWARPC has passed Resolution 2020-03 agreeing to partner with the Department for the Project; and

WHEREAS, it is understood that the NWARPC and the Department will adhere to the General Requirements for Recipients and Sub-Recipients Concerning Disadvantaged Business Enterprises (DBEs) (Attachment A) and that, as part of these requirements, the Department may set goals for DBE participation in the Project, ranging from 0% to 100%, that are practical and related to the potential availability of DBEs in desired areas of expertise; and

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

Intelligent Transportation Systems (ITS) is the application of advanced sensor, computer, electronics, and communication technologies and management strategies—in an integrated manner—to improve the safety and efficiency of the surface transportation system.

ITS covers a broad range of wireless and wireline communications-based information, control and electronics technologies. When integrated into the transportation system infrastructure, and in vehicles themselves, these technologies help monitor and manage traffic flow, reduce congestion, provide alternate routes to travelers, enhance productivity, and save lives, time and money. Intelligent Transportation Systems provide the tools for transportation professionals to collect, analyze, and archive data about the performance of the system during the hours of peak use. Having this data enhances traffic operators' ability to respond to incidents, adverse weather or other capacity constricting events.

Examples of Intelligent Transportation Systems include:

Advanced Traveler Information Systems deliver data directly to travelers, empowering them to make better choices about alternate routes or modes of transportation. When archived, this historical data provides transportation planners with accurate travel pattern information, optimizing the transportation planning process.

Advanced Traffic Management Systems employ a variety of relatively inexpensive detectors, cameras, and communication systems to monitor traffic, optimize signal timings on major arterials, and control the flow of traffic.

Incident Management Systems, for their part, provide traffic operators with the tools to allow quick and efficient response to accidents, hazardous spills, and other emergencies. Redundant communications systems link data collection points, transportation operations centers, and travel information portals into an integrated network that can be operated efficiently and "intelligently."

ITS Regional Architecture Development

The FHWA issued a final rule to implement Section 5206(e) of the Transportation Equity Act for the 21st Century (TEA-21) in January 2001. This final rule requires that ITS projects funded through the Highway Trust Fund conform to the National ITS Architecture and applicable standards.

To meet these requirements and ensure future Federal funding eligibility for ITS, NWARPC in conjunction with the ARDOT initiated the development of a Regional ITS Architecture and Deployment Plan. The Regional ITS Architecture provides a framework for ITS systems, services, integration, and interoperability, and the Regional ITS Deployment Plan identifies specific projects and timeframes for ITS implementation to support the vision developed by stakeholders in the Architecture.

The NWARPC in conjunction with local stakeholders and the consulting firm Kimley Horn developed the Regional ITS Architecture and Deployment Plan in 2006 and 2007. A kick off meeting was held on September 14, 2006 and numerous meetings and workshops followed. The final ITS Regional Architecture and Deployment Plan was presented to the TAC and RPC/Policy Committee on April 26, 2007. A process was initiated to amend the Architecture and Deployment Plan into the 2030 Northwest Arkansas Regional Transportation Plan. The TAC and Policy Committee met on May 24, 2007 and voted in favor of the amendment. The report can be found at <http://www.consystec.com/arkansas/nwark/web/projectdocs.htm>.

Some of the benefits of the Regional ITS Architecture are:

- Allows ITS implementation to be efficiently structured.
- Builds a foundation for explicitly incorporating operations and management into decision-making.
- Encourages stakeholder buy-in.
- Assists in estimating funding needs.
- Serves as a tool for education/regional information exchange.

- Assists in identifying gaps in existing services.

A brief summary of Regional Priorities from the ITS Deployment Plan:

- Continue municipal and county traffic signal system coordination and signal equipment upgrades.
- Continue pursuit of DMS deployment on I-49.
- Transit agencies will continue implementation of vehicle tracking and traveler information deployments.
- ARDOT will continue deployment of the I Drive Arkansas system.

CONGESTION MANAGEMENT PROCESS

Congestion management is the use of strategies to optimize operations of a transportation system through management and operation of the existing system. As such, a congestion management process (CMP) is a systematic regional approach that provides current performance measures detailing the system performance and evaluates strategies that meet the local objectives. The NWARPC finalized the current CMP in May 2015. This report can be found at <https://www.nwarpc.org/transportation/congestion-management-process/>. The NWARPC is updating the CMP beginning in 2021.

The CMP is intended to serve as a systematic process that provides for safe and effective integrated management and operation of the multimodal transportation system. The process includes:

- Development of congestion management objectives.
- Establishment of measures of multimodal transportation system performance.
- Collection of data and system performance monitoring to define the extent and duration of congestion and determine the causes of congestion.
- Identification of congestion management strategies.

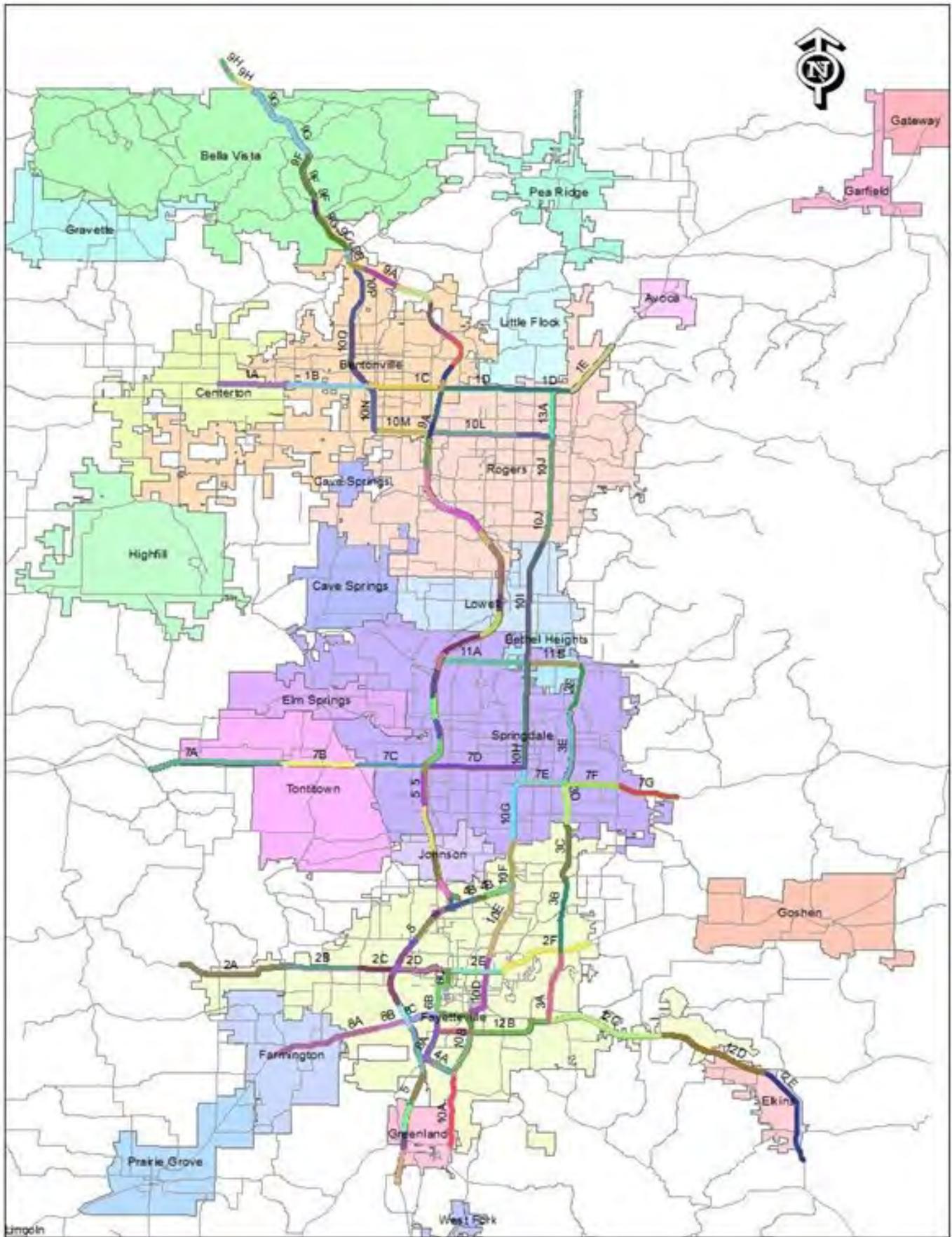
The Northwest Arkansas CMP provides a structure for responding to congestion in a consistent, coordinated fashion by responding to congestion through a process that involves developing congestion management objectives, developing performance measures to support these objectives, collecting data, analyzing problems, identifying solutions, and evaluating the effectiveness of implemented strategies.

The goal of the CMP is to ensure optimal performance of the transportation system by identifying congested areas and related transportation deficiencies.

The CMP network includes 224.5 centerline miles of roadway spread over 13 different roadways divided into 234 directional links bound by a traffic signal, stop sign, or major cross street. Of the 242 directional miles studied in the morning peak and afternoon peak periods, it was determined to classify the top 15 percent of the segments as congested including both the results of the AM and PM periods. The AM period was defined from 7:00-9:00 AM, while the PM period was defined from 4:30-6:30 PM. Map 8.2 shows the 2015 CMP Network.



Hwy. 412 (Sunset Ave)



Map 8.2 - 2015 CMP Network

CONGESTION PERFORMANCE MEASURES

The purpose of the CMP Study was to identify and quantify problem areas in the region using 2013 private sector travel speed data and ARDOT volume data. Private sector 2013 travel speed data was procured for the region which covered the National Highway System (NHS) and arterial network in the urbanized area. Through the use of private sector travel speed data, various performance measures were calculated.

NWARPC has introduced the use of congestion index (CI) as one element of performance in the CMP. This performance measure allows easy comparison of the efficiency of roadways as a ratio of average travel speed to the posted speed limit. The second measure is volume delay per mile. This performance measure calculates the delay or amount of time drivers wait as compared to traveling at the posted speed. Also, by multiplying it by the link volume, the overall impact of the delay can be measured. CI is purely a measure of delay time, but does not relate the number of cars in the delay. In many cases the minor or secondary roads are high on the CI ranking but rank lower on the volume delay because fewer vehicles and people are affected on these secondary roads. The CMP segments vary in length across the board between those on arterials and freeways. In order to standardize the results and allow direct comparison across the network, the volume-delay results were divided by the length. This measure provides a result with the units of vehicle hours of delay per mile, thus allowing a more direct comparison between segments. As a result, the preferred performance measure was determined and used to identify the operating results of each link of the CMP network.

Congestion Index (CI)	Actual Average Speed / Weighted Average Posted Speed Limit
Actual Average Speed	Average speed of all INRIX data on the segment
Weighted Average Posted Speed Limit	Average of all posted speed limits on the segment weighted by length
Volume Delay (VD/mile)	Delay X Segment Volume / Segment Length

Based on the local conditions in the region, attention was focused on the peak periods. The duration of congestion and other performance measures were not as much of a concern with the short peaking of congestion within the region. This also is applicable in most areas of the region to performance measures based on volume. There are a few areas within the region where capacity is an issue, but most delay occurs at the node level and is not a link problem. Because volume is measured mid-block and does not consider the operations of the nodes (intersections), attention is being focused at the location where the MPO can get the most benefit.

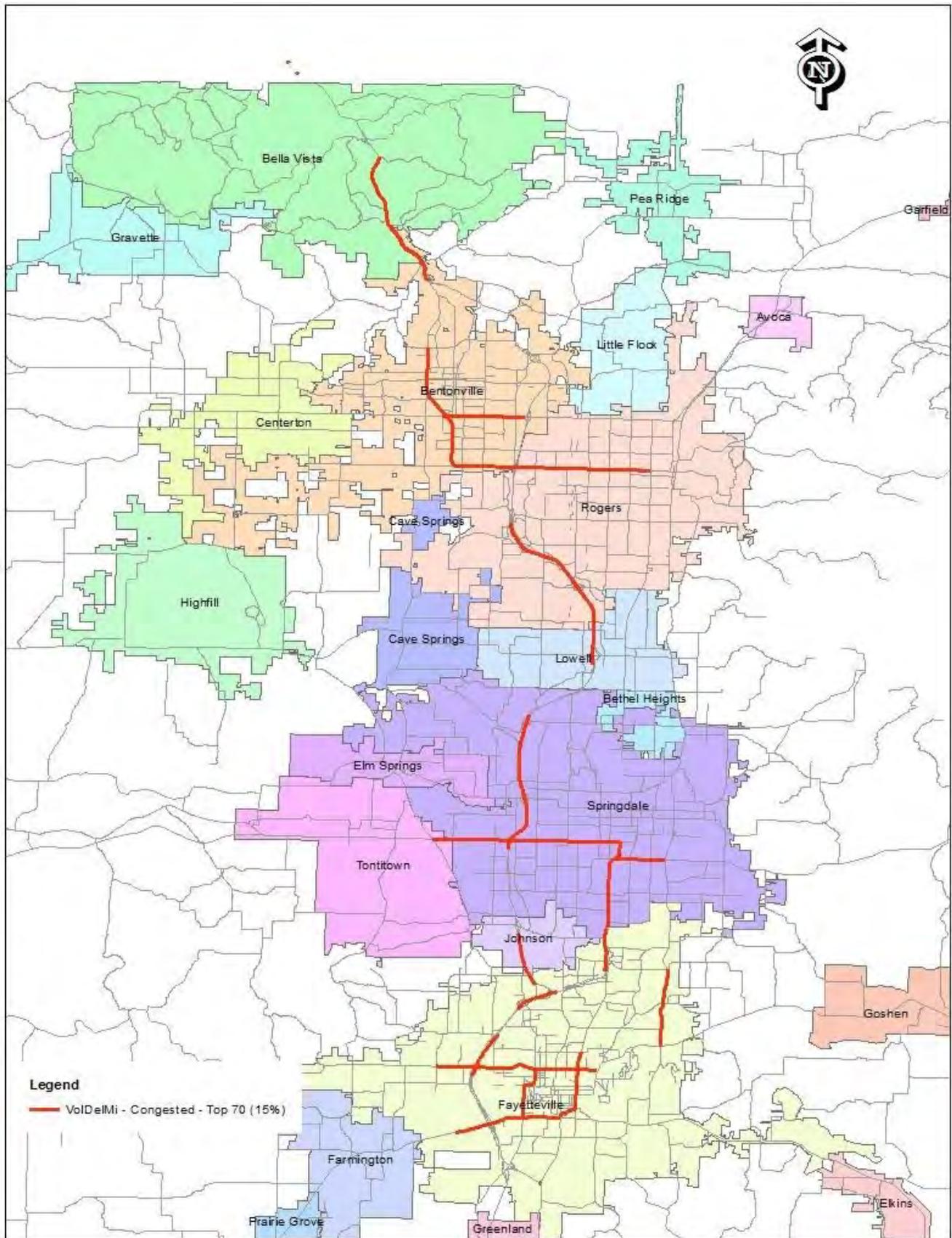
The primary performance measure is volume delay per mile. In order to narrow the focus on those roadway segments that need attention and commonly have recurring delay, the results were tabulated and the highest 15 percent of the network was categorized as congested. Over time, with future updates, the region will be able to revisit these thresholds and adjust as desired. FHWA encourages flexibility with the process and customization of the methodology and performance measures to respond to the local and regional objectives.

The region can also consider adding other performance measures in future updates that are multi-modal based that reflect the accessibility of transit, bike, and pedestrian facilities. This can be as direct on the regional level as the percent of jobs or households within ¼ mile of transit. This will serve as an indicator of the accessibility to transit and should have some correlation to the ridership.

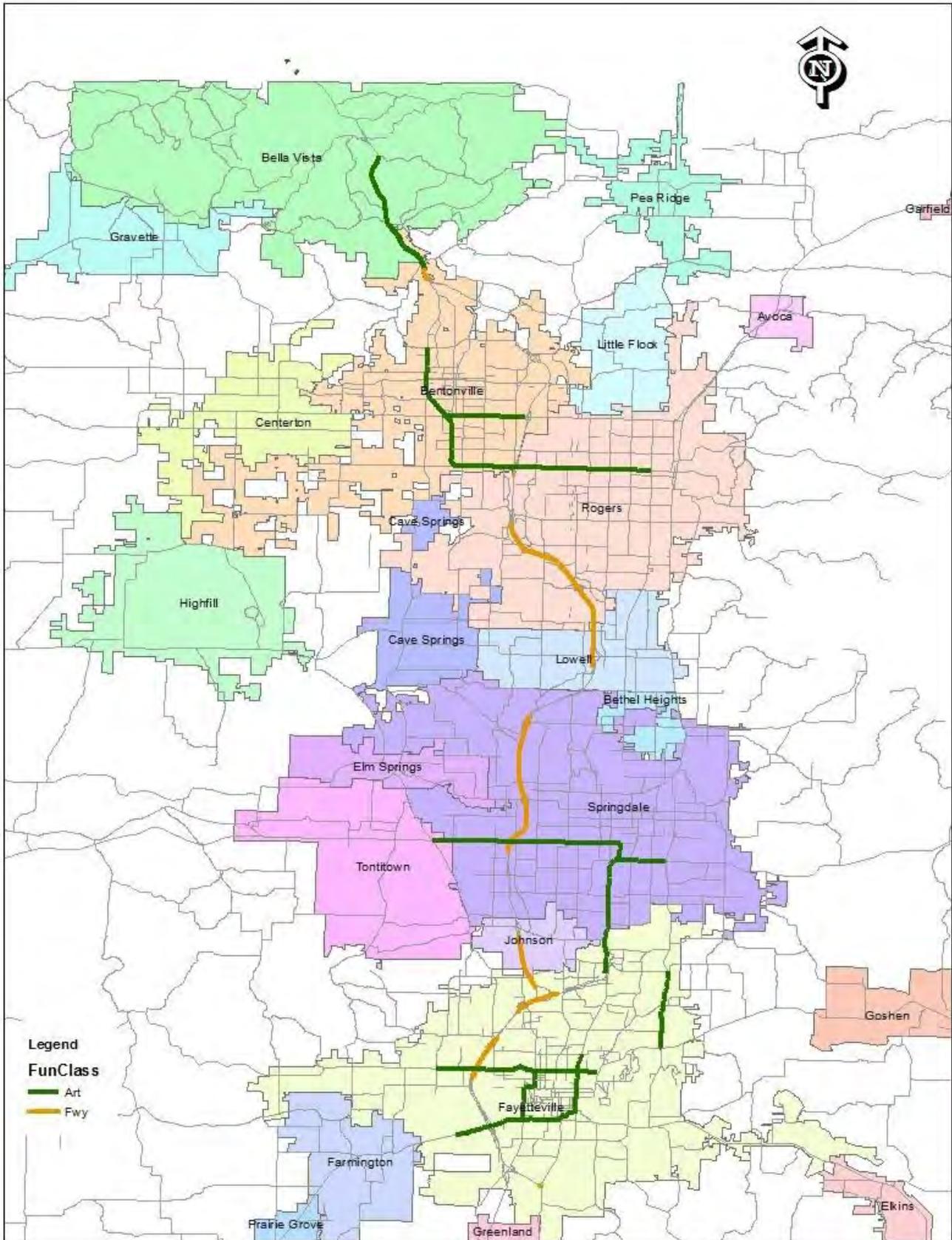
Table 8.1 and Maps 8.3 and 8.4 show the Top 20 congested segments in CMP Study based on the volume-delay per mile performance measure for both the AM and PM peak period. This results in some segments being classified as “congested” for both periods.

Top 20 Rank (Art/Fwy)	SegmentId	Route	Segment Name	Time Period	Func Class	City	Length (mi)	Weighted Avg Speed Limit	Congestion Index	Volume Delay per Mile
1	9E	Hwy 71 - SB	Mercy Way to Riorden Rd	AM	Art	Bella Vista	1.61	45.0	0.51	194.2
2	9C	Hwy 71 - SB	Peach Orchard Rd to Mercy Way	AM	Art	Bella Vista	1.34	45.0	0.49	168.1
3	2E	North St - EB	Oakland Ave to Hwy 45	PM	Art	Fayetteville	1.37	26.4	0.38	155.0
4	5389030	I-49 - SB	South of Fullbright	PM	Fwy	Fayetteville	0.27	60.0	0.68	123.3
5	2E	North St - EB	Oakland Ave to Hwy 45	AM	Art	Fayetteville	1.37	26.4	0.45	106.4
6	5369443	I-49 SB	Short segment at on-ramp from Walnut	PM	Fwy	Rogers	0.21	70.0	0.44	103.4
7	10M	Hwy 71B - EB	I-49 to Rainbow Rd	PM	Art	Bentonville	1.34	45.0	0.46	79.2
8	5369443	I-49 SB	Short segment at on-ramp from Walnut	AM	Fwy	Rogers	0.21	70.0	0.48	73.1
9	2C	Hwy 16 - EB	Rupple Rd to Futtrall	PM	Art	Fayetteville	1.07	43.9	0.48	70.1
10	2C	Hwy 16 - WB	Rupple Rd to Futtrall	PM	Art	Fayetteville	1.07	43.9	0.48	69.7
11	5389031	I-49 - SB	West of Hwy 112	PM	Fwy	Fayetteville	0.25	60.0	0.65	67.2
12	5369409	I-49 - NB	South of Walton on-ramp	PM	Fwy	Bentonville	0.34	54.4	0.47	66.6
13	10M	Hwy 71B - Walton Blvd - WB	I-49 to Rainbow Rd	PM	Art	Bentonville	1.34	45.0	0.50	65.7
14	9C	Hwy 71 - NB	Peach Orchard Rd to Mercy Way	PM	Art	Bella Vista	1.34	45.0	0.71	60.9
15	5402368	Hwy 71 - SB	North CMP limits	PM	Art	Missouri	0.06	45.0	0.40	58.5
16	10F	Hwy 71B - NB	Shiloh to Tyson Pkwy	PM	Art	Springdale	1.70	43.3	0.55	55.4
17	5389276	I-49 - NB	North of Hwy 412	AM	Fwy	Springdale	0.54	70.0	0.67	53.6
18	5402369	Hwy 71 - NB	North CMP limits	PM	Art	Missouri	0.06	45.0	0.42	52.7
19	5389139	Fullbright - WB	Within I-49 interchange	PM	Fwy	Fayetteville	0.61	60.0	0.71	51.6
20	5389081	I-49 - NB	South of Fullbright interchange	AM	Fwy	Fayetteville	0.43	63.5	0.73	51.0

Table 8.1 - Top 20 Congested Segments in the CMP Study



Map 8.3 - Congested Road Segments

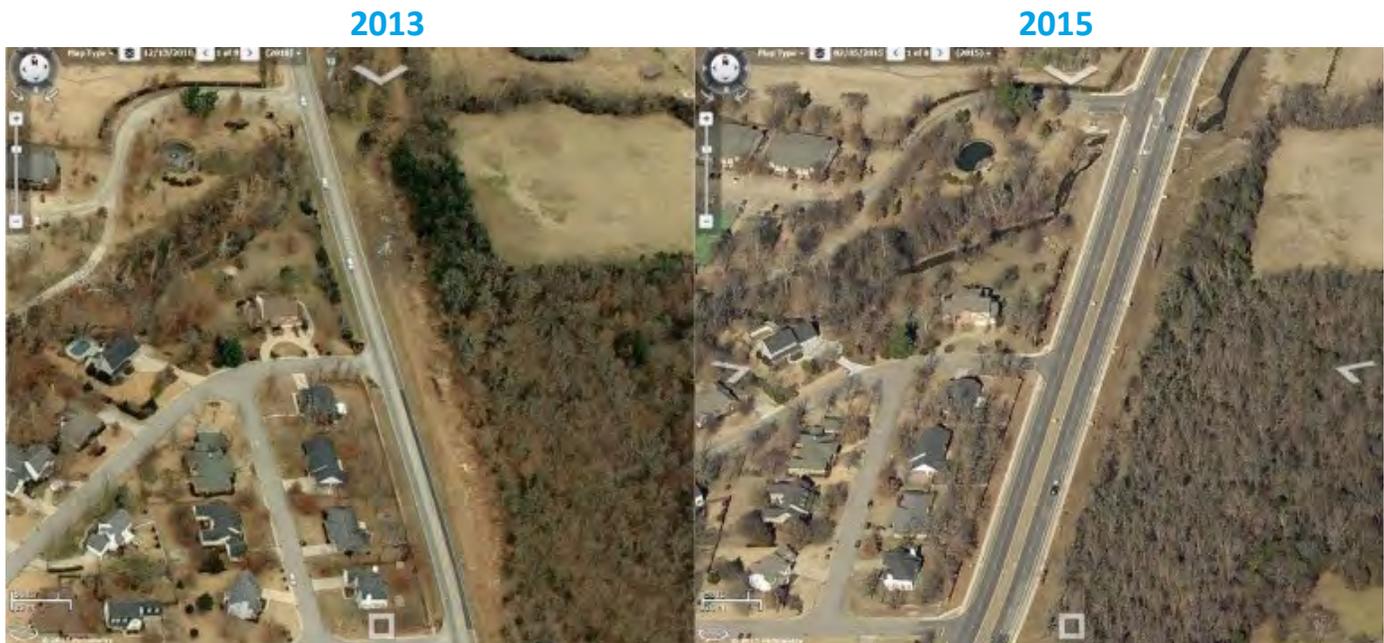


Map 8.4 - Congested Road Segments by Functional Class

CONGESTION MANAGEMENT STRATEGIES

Access Management

Access management is accomplished in a variety of ways such as managing the design of access points, the location of access points, the number of access points allowed within a given distance (access density), and the roadway median treatment. Generally, the number of access points is minimized and regularly spaced from each other so that conflict points are separated.



Highway 265 Access Management Plan – 3-lane Undivided to 4-lane Divided Median Boulevard, Bike Lanes, and Sidewalks

Signal Timing

Signal timing improvements are a relatively inexpensive way to make significant improvements on a transportation network. Improved signal timing can decrease delay by appropriately allocating green time among competing phases. This allows more traffic to pass through the signal with less delay. By adjusting cycle lengths and offsets, drivers can travel longer distances along a corridor before having to stop for a red light. This decreases travel time and improves air quality. Both signal timing optimization and traffic signal progression are low-cost improvements to make the best use of existing capacity and optimize allocation of funding. The cost for a signal timing improvement project varies depending on the number of traffic signals, the controller capabilities, the location of the traffic signals and adjacent signals, the number of timing plans required, and implementation and fine-tuning needs. Adaptive signal control as has been implemented along Hwy. 71B in Springdale and Rogers and Hwy. 62 in Rogers and will be more expensive per intersection than just occasional signal optimization, but depending on the application, may be cost effective in the long run.

Signal timing is an area that deserves attention within the region to allow maximum efficiency of the existing system before costly widening to add capacity. The results will be very evident as has been demonstrated previously with localized projects. A regional perspective would produce consistent travel time runs even when crossing from one city/agency to another.

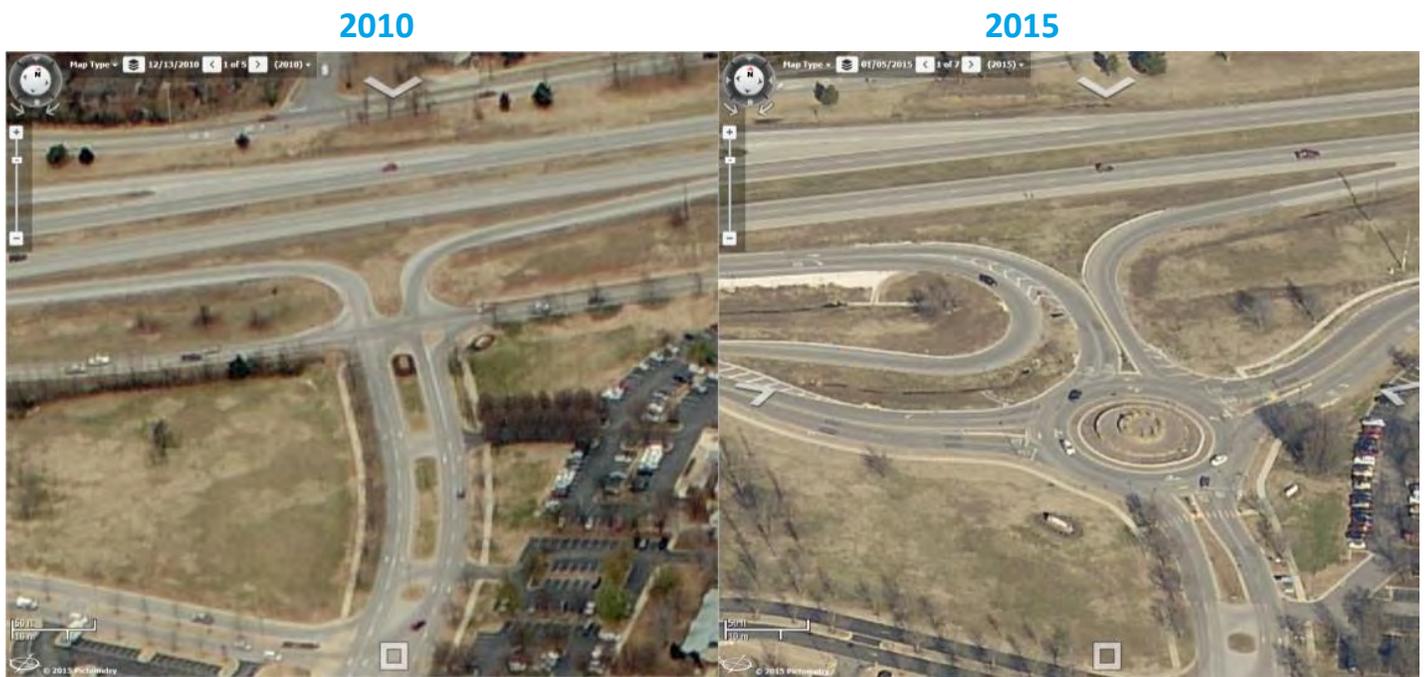
As transportation funding continues to be limited, operations are being highlighted by many regions across the country. It has been clearly proven locally and nationally that operational improvements provide the highest benefit/ cost ratio and on a regional scale as compared to local capacity projects that benefit a smaller portion of the area.

Data collection, development of a model for each desired timing plan, signal timing optimization, and implementation can be accomplished along a corridor for around \$3,000 per intersection (not including any necessary hardware in the signal cabinet).

The methods will vary as to how to accomplish the desired results depending on the signal hardware currently in place and the expansion capabilities. It can be as simple as installing a GPS clock at each intersection (\$500) to synchronizing the controller clocks, to more advanced systems where each intersection needs vehicle detection (\$15,000) and wireless communications (\$2,500) between signals. Either way, the benefit/cost ratio of this type of work is unmatched in today's funding environment.

Intersection and Interchange Geometrics and Control

Adding signals or roundabouts, when warranted, may be an improvement at all-way stop intersections or intersections with heavy major-street and cross-street traffic. This reduces delay for previously stop-controlled movements but may increase delay for movements that were not controlled. As traffic volumes increase, traffic signals or other types of intersection design such as roundabouts or continuous flow intersections should be considered to efficiently move traffic. Local intersection improvements also can result in big reductions in delays through bottleneck mitigation. Local improvements include geometric changes related to increased queue storage to channelized right turns and overlapping signal phases.



Fulbright Expressway - Northhills Boulevard - Futrall Drive Roundabout

2010

2015



Fayetteville Flyover/Fulbright Expressway

Incident Management

Non-reoccurring congestion based on traffic incidents (crashes) can account for up to 25 percent as the source of congestion. Incident management plays a large roll in reducing delays and secondary incidents. By identifying incidents early and having quick responses from tow trucks available in close proximity that may be stationed or roving, clearing of incidents helps traffic return to normal operations as quick as possible.

Safety Projects – Roadway Departures, Grade Separated Bicycle and Pedestrian Crossings

Safety projects reduce crash rates and the severity of crashes. The region should continue to deploy rumble strips as needed, cable median barriers, enhanced signing at curves and high friction pavements to reduce crash rates on the CMP network. Additionally, two Razorback Regional Greenway trail crossings have been grade-separated (MLK/Hwy. 180, and S. Walton Blvd./Hwy. 71B) on the CMP network which improves the safety and reliability of both systems.

2010

2015



I-49 Cable Median Barrier Project, Springdale, AR

ARDOT is installing approximately 600 miles of cable barrier installations statewide. Within the MPA, ARDOT has installed approximately 46 miles of cable barrier with 24 miles of cable barriers along I-49 between Fayetteville and Bentonville (Table 8.2). The safety project was completed in 2012 between Fayetteville and Rogers. ARDOT reported that from 2007 to 2011, before the cable barriers were installed, there were 17 serious median crossover crashes that resulted in 10 fatalities along I-49, an average of two fatalities per year. In areas where I-49 was widened, a concrete barrier replaced the cable median barrier.

Jobs Completed/Under construction/Programmed			
County	Location	Length	Total Length
Benton	Hwy 71, Section 190, LM 0 - 5.5	5.5	25.97
	Hwy 412, Section 010, LM 4.83 - 13.64	8.81	
	I-49, Section 050, LM 74.19 - 85.85	11.66	
Washington	Hwy 71, Section 160, LM 22.39 - 23.32	0.93	18.54
	Hwy 412, Section 020, LM 0 - 2.49	2.49	
	I-49, Section 040, LM 40.2 - 41.13	0.93	
	I-49, Section 040, LM 60 - 60.56	0.56	
	I-49, Section 040, LM 60.56 - 74.19	13.63	

Table 8.2 - Cable Barrier Jobs

2010

2015



MLK Blvd - Razorback Regional Greenway Pedestrian and Bicycle Underpass

Capacity

Roadway widening is necessary where traffic signal timing and access management are unable to provide enough capacity for heavy traffic volumes. Some segments may improve in the short term with optimized signal timing, but may ultimately warrant additional capacity through widening. Widening could include adding a through lane for a long section of road, or providing turn lanes at intersections. Capacity improvements on I-49 (widening) and designing urban interchanges to accommodate anticipated traffic continues to be a priority for the region.

2010

2015



Don Tyson Parkway Interchange/I-49

National Performance Management Research Data Set (NPMRDS)

Transportation agencies are increasingly using probe vehicle data for transportation system performance management and as a resource for meeting the federal requirements of monitoring and reporting congestion and freight performance enacted in the Moving Ahead for Progress in the 21st Century Act (MAP-21). Federal regulations require setting objectives and targets to guide transportation funding allocation based on safety and operational performance measures.

To assist agencies with meeting the MAP-21 regulations, the Federal Highway Administration (FHWA) provides free access to the National Performance Management Research Data Set (NPMRDS), a national database of probe-vehicle-based speed and travel time data. The NPMRDS offers a new opportunity to monitor and report work zone performance measures. Using the NPMRDS, agencies can better benchmark the baseline mobility conditions prior to work zone activity, quantify and analyze work zone mobility impacts both during construction and post-construction, and implement mobility objectives and targets to proactively manage work zone mobility impacts. More information about this program can be found at <https://ops.fhwa.dot.gov/publications/fhwahop20028/index.htm>

The National Performance Management Research Data Set in a Nutshell

Data Providers: INRIX, TomTom, HERE

Funded By: FHWA

Purpose: Support MAP-21 regulation and ongoing transportation system mobility performance measurement

Users: Federal, State, and regional agencies

Data Source: Probe vehicles

Metrics: Speed, travel time, and static AADT (2017)

Data Latency: One-month old

Lowest Temporal Resolution: 5 minutes

Spatial Resolution: TMC level (about ½ mile to 1 mile in urban/suburban areas and 5-10 miles in rural areas)

Geographical Coverage: NHS

Modal Coverage: Truck and passenger car Data Format: CSV and ArcGIS shapefiles (road segment details)

Licensing Agreement: Required

The NPMRDS contains field-observed travel time and speed data collected anonymously from a fleet of probe vehicles (cars and trucks) equipped with mobile devices. Using time and location information from probe vehicles, the NPMRDS generates speed and travel time data aggregated in 5-minute, 15-minute, or 1-hour increments. The data are available across the National Highway System (NHS), with a spatial resolution defined by Traffic Message Channel (TMC) location codes. A TMC represents a unique, directional roadway segment that is about half a mile to a mile long in urban and suburban areas and could be as long as five to ten miles long in rural areas. The NPMRDS covers more than 400,000 TMCs and includes several billions of speed and travel time observations across the NHS for both freeways and arterials. The NPMRDS has been available since 2013, with freeway data dating back as far as 2008.

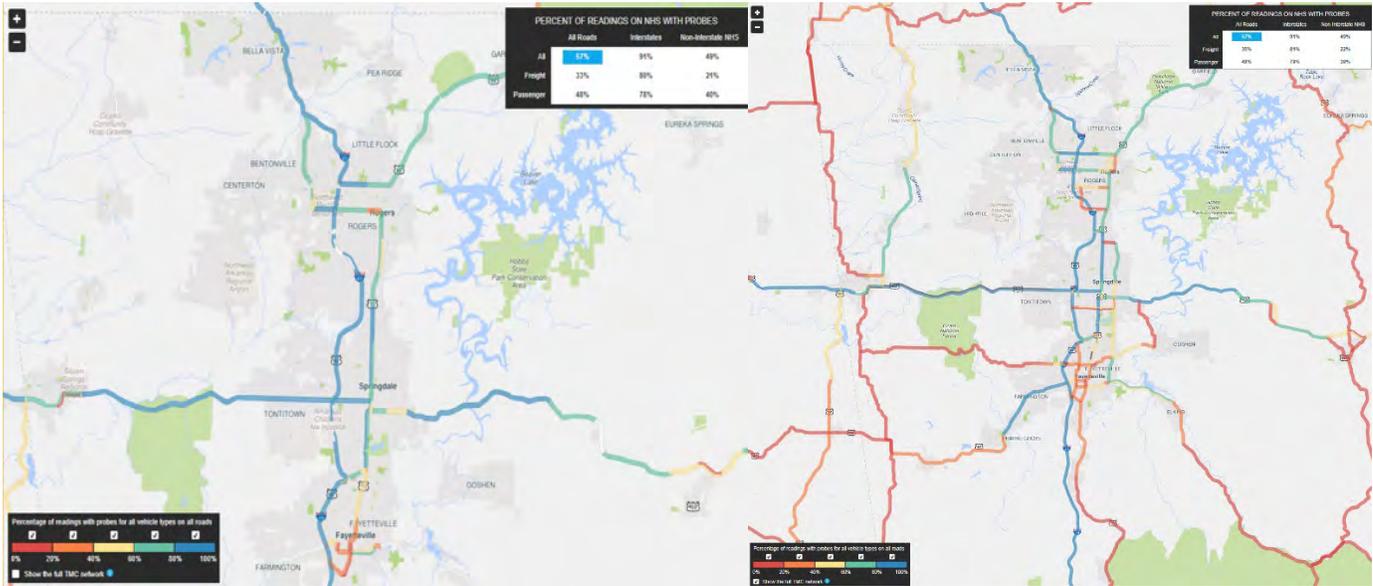
NPMRDS data are populated monthly for the previous month, thus they are not available in real time. Agencies can use the data for non-real-time analysis, performance monitoring, and reporting. State and other transportation agencies can access and use the NPMRDS for free through an account with the Regional Integrated Transportation Information System (RITIS) after agreeing to the necessary license agreement (<https://npmrds.ritis.org/>). The NPMRDS data can be used for a variety of applications, including planning, design, traffic operations and management, freight analysis, safety analysis, and congestion analysis.

Limitations of the National Performance Management Research Data Set

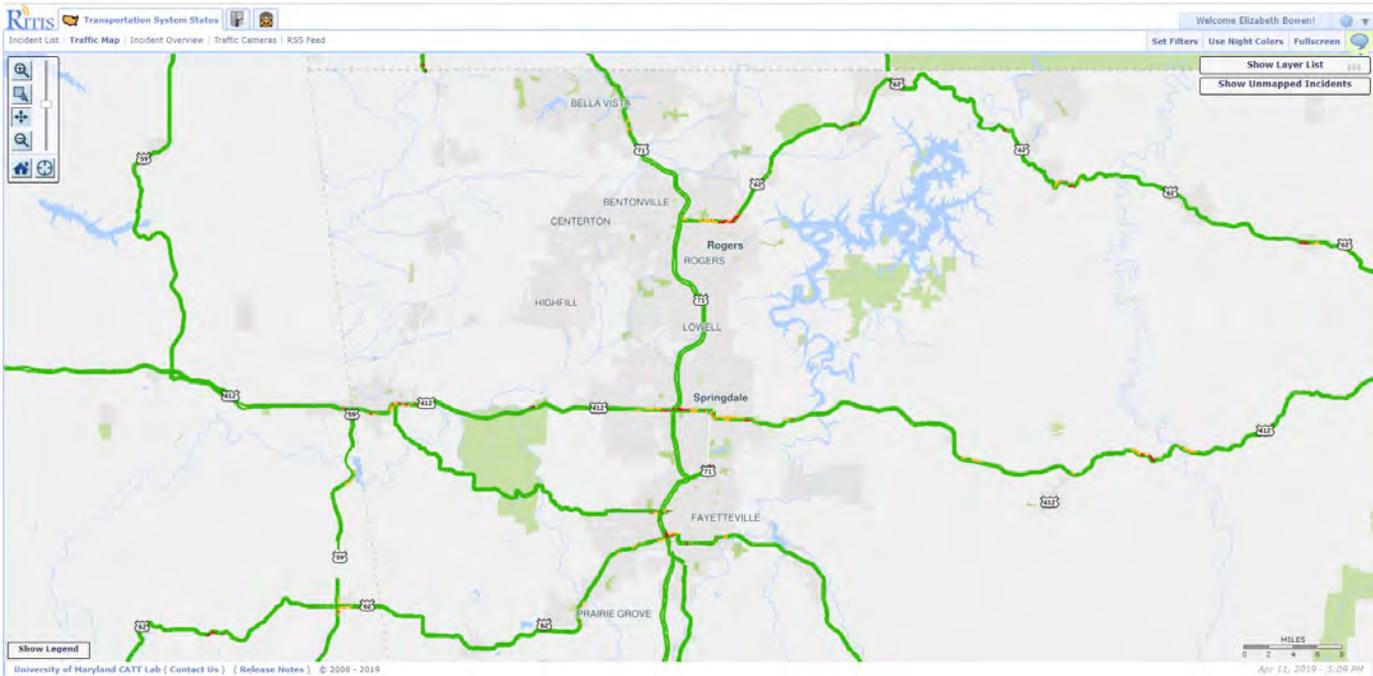
Although the NPMRDS creates a new opportunity for offline monitoring and performance reporting of work zones and other transportation aspects, there are some limitations that State and local agencies must consider when performing an analysis using the NPMRDS.

- **The NPMRDS does not provide real-time data.** NPMRDS data are a month old and therefore cannot be used for real-time traffic monitoring. However, the NPMRDS is very well suited for offline work zone performance assessment and post-hoc evaluations. For real-time management needs, agencies can purchase real-time probe-vehicle data from appropriate providers (e.g., RITIS, INRIX).
- **Data quality and availability varies.** The NPMRDS may have a significant number of outliers and missing values depending on road type, location, day of week, time of day, segment length, and traffic volume. For road segments not traversed by a probe vehicle during a certain time period, the corresponding entries in the NPMRDS are left blank and not imputed with historical data. Therefore, data may not be complete for all road segments (especially rural, lower-volume areas) or for all hours of the day (especially nighttime conditions). This could limit agencies from being able to use for the NPMRDS for monitoring and reporting work zone performance on low-traffic and rural roads.
- **TMC segment lengths in some areas (e.g., rural roads) may be too long to provide an accurate picture of delay and travel time.** TMC segment lengths could be as long as 5 to 10 miles, especially in rural areas. This could misrepresent the actual traffic speed and travel time observed around work zones, especially if queues are only a couple of miles long (a small part of the larger segment). Agencies can overcome this limitation by purchasing data at a higher granularity from INRIX or other providers.
- **Coverage of the NPMRDS is only on the NHS.** Because the NPMRDS covers only the NHS, it is not useful for examining the mobility impacts of work zones located on roads outside of the NHS.
- **The basic NPMRDS (free package provided by FHWA) does not come with pre-built analytical tools.** Agencies may download NPMRDS data into an appropriate tool/platform (e.g., Microsoft® Excel, database tool, statistical analysis tool, etc.) to run analyses, reports, and visualizations. Alternatively, agencies may purchase access to the web-based NPMRDS Deep-dive Analytical Toolset through the American Association of State Highway Transportation Officials' (AASHTO's) TMC Pooled Fund Study, or directly from the University of Maryland CATT Laboratory. (An option to expand the NPMRDS dataset well beyond the NHS is also available through AASHTO.) The NPMRDS Deep-dive tools provide many features including Congestion Scans, Performance Summaries/Charts, Road User Cost Analyses, Animated Trend Maps, and Custom MAP-21 Dashboards. Specific information about these is found here: <https://www.tpm-portal.com/wp-content/uploads/cpbm/20171214-slides.pdf>. General information about these and other tool options is found at <https://www.ritis.org/tools>.

NWA NPMRDS NETWORK



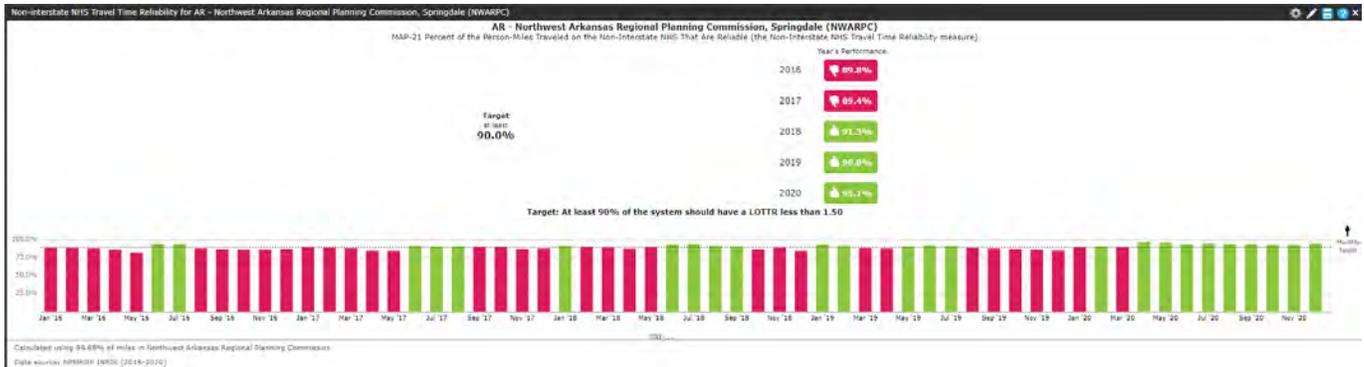
April 11, 2019



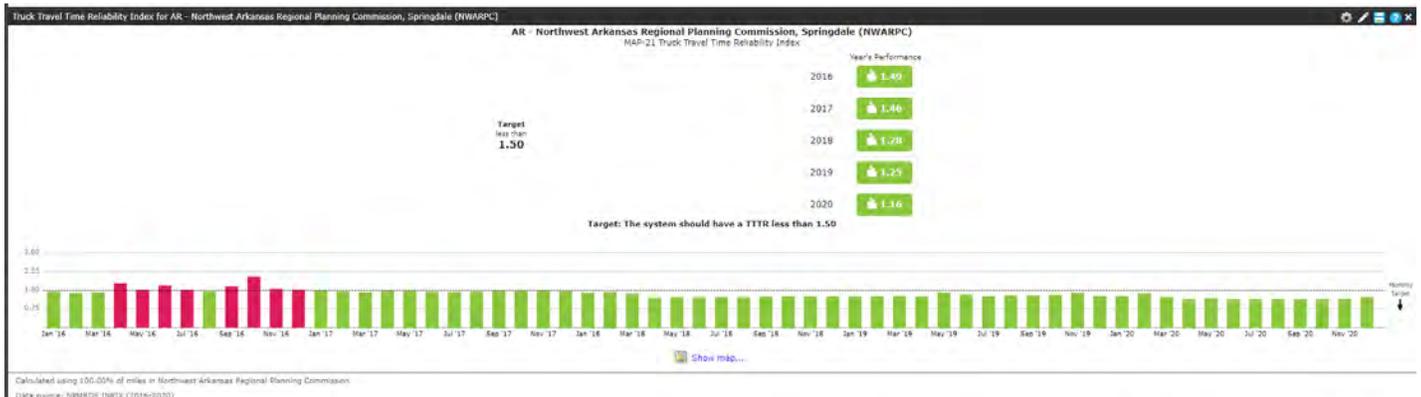
Interstate Travel Time Reliability for NWARPC



Non-Interstate Travel Time Reliability for NWARPC



Truck Travel Time Reliability for NWARPC



TRANSPORTATION DEMAND MANAGEMENT (TDM)

TDM (also known as Mobility Management) is a general term for various strategies that increase transportation system efficiency. TDM treats mobility as a means to an end, rather than an end in itself, and so helps individuals and communities meet their transport needs in the most efficient way, which often reduces total vehicle traffic. TDM prioritizes travel based on the value and costs of each trip, giving higher value trips and lower cost modes priority over lower value, higher cost travel, when doing so increases overall system efficiency. It emphasizes the movement of people and goods, rather than motor vehicles, and so gives priority to public transit, ridesharing and non-motorized travel, particularly under congested urban conditions.

There are many different TDM strategies with a variety of transportation impacts. Some improve the transportation options available to consumers. Some cause changes in trip scheduling, route, destination or mode. Others reduce the need for physical travel through more efficient land use, or transportation substitutes such as telecommuting. TDM is an increasingly common response to transport problems. Although most individual TDM strategies only affect a small portion of total travel, the cumulative impacts of a comprehensive TDM program can be significant.

TRANSIT ORIENTED DEVELOPMENT (TOD)

Transit oriented development (TOD) can be defined as mixed use residential or commercial development within walking distance of a transit station designed to maximize access to transit and incorporating features designed to encourage transit ridership. A TOD often resembles other activity centers with a greater mix of uses and higher densities than the surrounding market area. TODs typically have the following features:

Mix of Uses – Land uses can be mixed either vertically or horizontally. TOD is most often primarily residential at suburban locations but can have employment and other commercial and retail uses at activity center and downtown locations.

Compact Development – TODs are built at higher densities than the surrounding market area, creating a focal point around a transit station. The density and amount of development are market driven; higher land values support higher development densities and more urban locations support greater amounts of development.

Pedestrian Oriented – The development pattern at TODs is designed to facilitate pedestrian access to and from the station with ample sidewalks, interconnected blocks and streets, and buildings oriented toward the street, and parking located in secondary locations.

Urban designers and planners who advocate more infill and compact development suggest TOD as one alternative. TOD is compact, walkable development occurring within one-half mile of a transit stop. In general, transit-oriented developments include a mix of uses, such as housing, shopping, employment, and recreational facilities within a design that puts a high priority on accommodating transit, pedestrians and bicycles.

Besides providing direct access to transit, transit-oriented developments can offer a variety of destinations close to one another, making it possible to move around without exclusive reliance on a car. If possible, transit-oriented developments should incorporate an attractive public area —for example, streets with trees, furniture, and plazas—to encourage pedestrian activity.

Opportunities for TOD in Northwest Arkansas may include downtown locations in large and small cities. Also, locations near major freeways, such as I-49, might be adaptable to TODs should bus rapid transit become available. Lower transportation costs, according to TOD advocates, can offset the higher housing costs of living in an urban neighborhood. Urban neighborhoods tend to have high housing costs but lower transportation costs. Current mortgage assessments only consider housing costs and treats automobile ownership as a financial asset rather than a liability, encouraging homebuyers to choose automobile-dependent locations. Higher density, location-efficient development creates a more neutral housing market.



Even though there may be many benefits with TOD, there are also many obstacles to their development. Neighborhood groups usually oppose high-density developments that might attract more traffic. Local development codes around transit stations usually favors low-density, auto-oriented uses. Mixed-use, higher density projects with reduced amounts of parking (such as in TOD) can significantly increase risks for developers and financiers.

TOD can be more costly, and can be subject to more regulations and more complex local approval processes, as compared to conventional automobile-oriented development. Lenders typically have concerns about financing mixed-use projects or those with lower parking ratios as with TOD.

Given the listed potential advantages of TOD and the possible funding sources the region should consider how such developments might be encouraged in Northwest Arkansas.

Becoming Transit Ready

Planning for transit and TOD is compatible with multiple revitalization and redevelopment goals such as attracting mixed use development, increasing development density and diversity, creating walkable neighborhoods and business districts, and redeveloping or re-purposing obsolete industrial property adjacent to rail corridors. Many communities in the Kansas City, Denver, and Dallas regions are planning or have planned for transit service and TOD well in advance of an operating transit service. Many of the principles of TOD—higher densities, walkability, and a mix of uses—are the same principles that apply to any urban, suburban, or downtown revitalization planning effort. Since land use change can take several years, it is important to begin planning and implementing higher density development and revitalization plans now to position the region for future transit service.



Source: Fayetteville Downtown Master Plan

PERFORMANCE MANAGEMENT AND SYSTEM MEASURES

MAP-21/FAST Act established a performance and outcome-based program. NWARPC, ARDOT and MoDOT are required to develop plans and programs that help achieve the national goals for (1) Safety, (2) Infrastructure Condition, (3) Congestion Reduction, (4) System Reliability, (5) Freight Movement and Economic Vitality, (6) Environmental Sustainability, and (7) Reduced Project Delivery Delays.

Over the past several years, final rules on performance measures and targets have been published by FHWA and FTA. MoDOT, ARDOT, and NWARPC continues to work together to identify measures and develop systems/methodologies to implement performance-based transportation planning and programming.

NWARPC 2045 MTP Goals		2045 MTP System Performance Measures
Preserve and Maintain Infrastructure	Maintain the existing and planned transportation system through ongoing maintenance, rehabilitation, reconstruction, and/or preservation.	Percentage of interstate pavements in good condition Percentage of interstate pavements in poor condition Percentage of non-interstate NHS pavements in good condition Percentage of non-interstate NHS pavements in poor condition Percent of NHS bridges by deck area classified as Good condition Percent of NHS bridges by deck area classified as Poor condition Pavement Condition on NHS Transit (PTASP) mean distance between major mechanical failure Transit (TAM) Plan transit bus/fleet age/condition
Improve Safety	Increase transportation safety for all modes of travel	Number of fatalities Fatality rate per 100 million VMT Number of serious injuries Serious injury rate per 100 million VMT Number of non-motorized fatalities and serious injuries Transit (PTASP) Number of fatalities and injuries and rate per revenue miles
Reduce Congestion Improve Reliability	Maximize the capacity and reliability of existing facilities on regionally significant routes and minimize the need for new roadways.	Interstate Travel Time Reliability Measure: Percent of Reliable Person-Miles Traveled on the Interstate Non-Interstate Travel Time Reliability Measure: Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS Freight Reliability Measure: Truck Travel Time Reliability Index Volume Delay Per Mile on CMP Congestion Index on CMP Level of Travel Time Reliability (LOTTR) on NHS Truck Travel Time Reliability (TTTR) on NHS
Improve Regional Mobility	Increase transportation mobility and accessibility for both persons and freight, thus promoting economic vitality in the region.	Miles of Complete Streets Miles of roadways with Access Management % population served by trails within 1/4 mile % population served by public transit within 1/4 mile Unlinked Trips per revenue mile (Transit, NTD) Unlinked Trips per Revenue hour (Transit, NTD)
Protect the Environment	To enhance the performance of the transportation system while protecting and enhancing the natural environment.	Number of Jurisdictions with drainage criteria manuals Number of jurisdictions with Karst BMP's Cave Springs Recharge Area

SAFETY

Safety of the transportation system is one of the national goals and a performance measurement area under MAP-21/FAST Act. Safety currently is measured nationally, by individual state, and by county based on data reported to the States and U.S. DOT. Safety performance is generally measured by calculating the fatality and serious injury rates of the system based on vehicle miles of travel (VMT) and 100,000 population.

Travel is measured as vehicle miles of travel (VMT) and is calculated and published each year by ARDOT and MoDOT in the Road and Street Mileage Report. This annual calculation is based on the Annual Average Daily Traffic (AADT) counts and mileage of the transportation system (AADT x Length of the roadway system = Vehicle Miles of Travel).

The rate of fatalities is generally expressed as rate per 100,000 population and as 100 million annual vehicle miles of travel (100 million VMT). These rates are generally compared to the U.S., State, and other counties.

NWARPC has provided the fatality and serious injury rates expressed in per 100,000 population and 100 million VMT. The Arkansas portion of the MPA boundary (Benton and Washington County) is calculated as one rate and McDonald County is calculated separately utilizing the Fatality Analysis Reporting System (FARS) and the Arkansas State Police Database.

From 2015–2019, Benton and Washington County, Arkansas averaged 46 fatalities each year. The total number of fatalities has ranged from 64 in 2016 to 36 in 2015.

Fatality Type	Washington County Fatalities					Washington County Fatalities Per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Total Fatalities (All Crashes)*	22	34	24	18	21	9.80	14.88	10.31	7.61	8.78
(1) Alcohol-Impaired Driving (BAC=.08+) Fatalities	5	9	6	5	3	2.23	3.94	2.58	2.11	1.25
(2) Single Vehicle Crash Fatalities	13	22	15	9	13	5.79	9.63	6.45	3.80	5.44
(3) Large Truck Involved Crash Fatalities	1	3	1	0	3	0.45	1.31	0.43	0.00	1.25
(4) Speeding Involved Crash Fatalities	4	10	6	4	4	1.78	4.38	2.58	1.69	1.67
(5) Rollover Involved Crash Fatalities	7	3	8	3	2	3.12	1.31	3.44	1.27	0.84
(6) Roadway Departure Involved Crash Fatalities	12	25	18	9	10	5.35	10.94	7.73	3.80	4.18
(7) Intersection (or Intersection Related) Crash	7	7	4	3	3	3.12	3.06	1.72	1.27	1.25
Passenger Car Occupant Fatalities	4	14	6	5	4	1.78	6.13	2.58	2.11	1.67
Light Truck Occupant Fatalities	10	8	12	2	5	4.46	3.50	5.16	0.85	2.09
Motorcyclist Fatalities	4	7	4	5	5	1.78	3.06	1.72	2.11	2.09
Pedestrian Fatalities	3	4	1	5	7	1.34	1.75	0.43	2.11	2.93
Bicyclist (or Other Cyclist) Fatalities	0	0	1	0	0	0.00	0.00	0.43	0.00	0.00

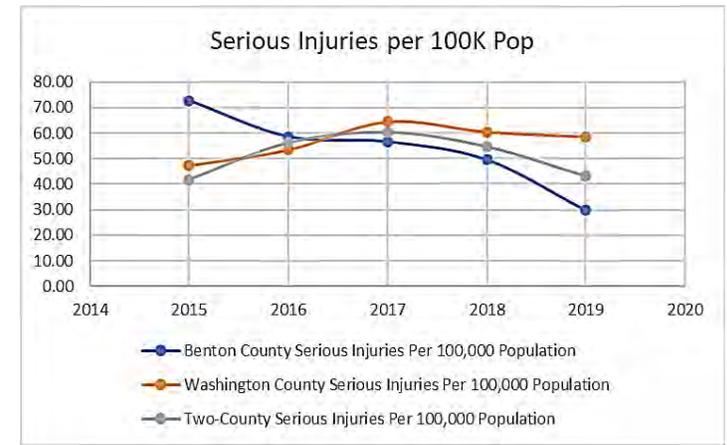
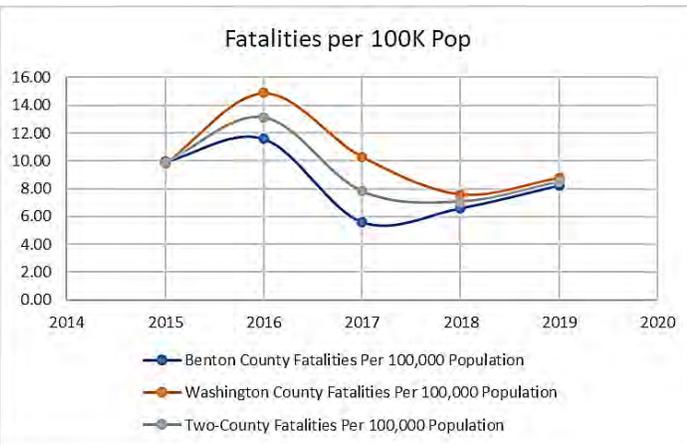
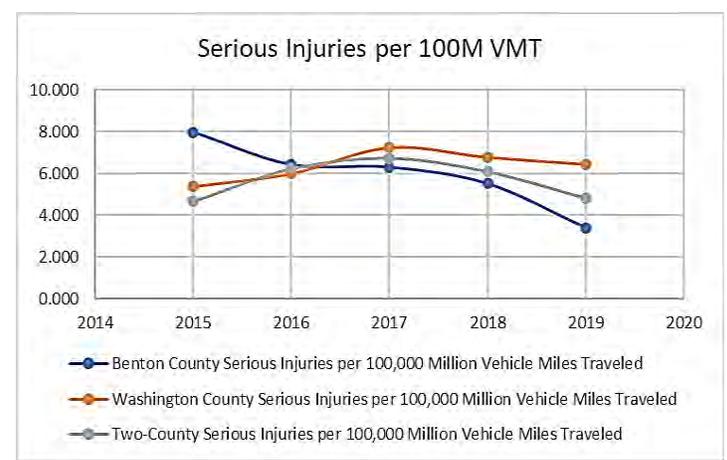
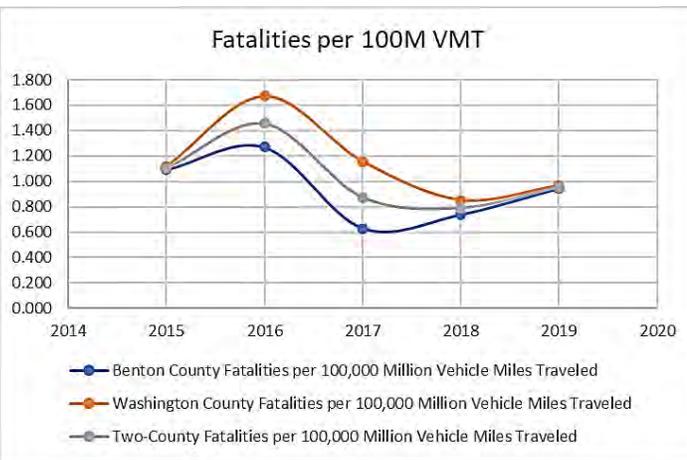
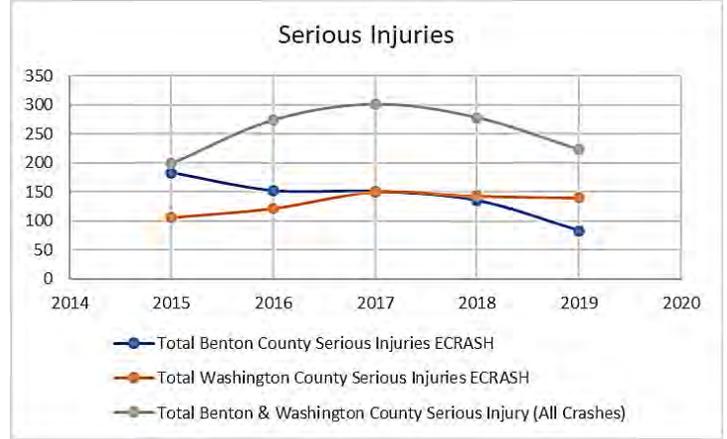
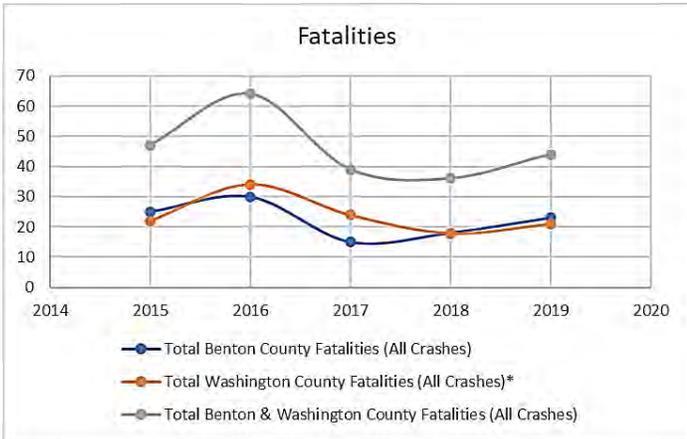
Fatality Type	Benton County Fatalities					Benton County Fatalities Per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Total Fatalities (All Crashes)*	25	30	15	18	23	9.94	11.57	5.63	6.61	8.24
(1) Alcohol-Impaired Driving (BAC=.08+) Fatalities	12	4	5	7	6	4.77	1.54	1.88	2.57	2.15
(2) Single Vehicle Crash Fatalities	12	12	4	12	15	4.77	4.63	1.50	4.41	5.37
(3) Large Truck Involved Crash Fatalities	3	3	4	0	0	1.19	1.16	1.50	0.00	0.00
(4) Speeding Involved Crash Fatalities	4	3	3	6	7	1.59	1.16	1.13	2.20	2.51
(5) Rollover Involved Crash Fatalities	5	4	6	5	4	1.99	1.54	2.25	1.84	1.43
(6) Roadway Departure Involved Crash Fatalities	11	16	8	12	15	4.37	6.17	3.00	4.41	5.37
(7) Intersection (or Intersection Related) Crash Fatalities	8	8	5	4	5	3.18	3.09	1.88	1.47	1.79
Passenger Car Occupant Fatalities	11	11	2	3	4	4.37	4.24	0.75	1.10	1.43
Light Truck Occupant Fatalities	6	7	4	10	7	2.38	2.70	1.50	3.67	2.51
Motorcyclist Fatalities	3	9	4	3	8	1.19	3.47	1.50	1.10	2.87
Pedestrian Fatalities	2	2	4	2	2	0.79	0.77	1.50	0.73	0.72
Bicyclist (or Other Cyclist) Fatalities	1	1	0	0	1	0.40	0.39	0.00	0.00	0.36

Fatality Type	McDonald County Fatalities					McDonald County Fatalities Per 100,000 Population				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Total Fatalities (All Crashes)*	9	8	9	8	10	39.68	35.23	39.61	34.84	43.79
(1) Alcohol-Impaired Driving (BAC=.08+) Fatalities	3	1	3	1	1	13.23	4.40	13.20	4.35	4.38
(2) Single Vehicle Crash Fatalities	2	5	6	5	3	8.82	22.02	26.41	21.77	13.14
(3) Large Truck Involved Crash Fatalities	1	1	0	1	2	4.41	4.40	0.00	4.35	8.76
(4) Speeding Involved Crash Fatalities	2	4	3	4	2	8.82	17.62	13.20	17.42	8.76
(5) Rollover Involved Crash Fatalities	1	4	3	4	3	4.41	17.62	13.20	17.42	13.14
(6) Roadway Departure Involved Crash Fatalities	5	4	5	6	3	22.04	17.62	22.01	26.13	13.14
(7) Intersection (or Intersection Related) Crash	4	1	1	1	2	17.63	4.40	4.40	4.35	8.76
Passenger Car Occupant Fatalities	7	2	2	2	6	30.86	8.81	8.80	8.71	26.27
Light Truck Occupant Fatalities	2	4	4	4	3	8.82	17.62	17.60	17.42	13.14
Motorcyclist Fatalities	0	1	2	2	0	0.00	4.40	8.80	8.71	0.00
Pedestrian Fatalities	0	0	1	0	1	0.00	0.00	4.40	0.00	4.38
Bicyclist (or Other Cyclist) Fatalities	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00

Source: National Highway Traffic Safety Administration - 2015-2019 Traffic Safety Facts Benton County, Arkansas; Washington County, Arkansas; and McDonald County, Missouri

- (1) Crash Involved at Least One Driver or Motorcycle Rider with a BAC of .08 or Above
- (2) Crash Involved Only One Vehicle in Transport
- (3) Crash Involved at Least One Large Truck
- (4) Crash Involved at Least One Vehicle Speeding
- (5) Crash Involved at Least One Vehicle that Rolled Over
- (6) Crash Involved at Least One Vehicle that Departed the Roadway (FHWA Definition)
- (7) Crash Occurred Within an Intersection or Within the Approach to an Intersection

*A Fatality Can Be in More Than One Category. Therefore, Sum of the Individual Cells Will Not Equal the Total Due to Double Counting



In 2019, Benton and Washington County fatalities per 100 million vehicles traveled was 0.955 which was below the national and state rate. The Arkansas rate was 1.36 fatalities per 100M VMT and the U.S. rate of 1.11 fatalities per 100M VMT. Benton and Washington County fatal crash rate for 2019 was 8.49 per 100,000. The national rate for 2019 was 11.00 per 100,000 and the rate for Arkansas was 16.73 per 100,000. Over the last five years the two-county area has been below the state and national fatality rate per 100,000.

Crashes: Fatalities and Serious Injuries	2015	2016	2017	2018	2019
Total Benton County Fatalities (All Crashes) FARS	25	30	15	18	23
Total Benton County Serious Injuries ECRASH	183	152	151	135	83
Total Benton County Population - July 1 Census ACS Est.	251,591	259,212	266,585	272,266	279,141
Benton County Annual Vehicle Miles Traveled	2,290,489,610	2,363,859,678	2,394,101,065	2,445,160,550	2,437,246,620
Benton County Fatalities Per 100,000 Population	9.94	11.57	5.63	6.61	8.24
Benton County Fatalities per 100,000 Million Vehicle Miles Traveled	1.091	1.269	0.627	0.736	0.944
Benton County Serious Injuries Per 100,000 Population	72.74	58.64	56.64	49.58	29.73
Benton County Serious Injuries per 100,000 Million Vehicle Miles Traveled	7.990	6.430	6.307	5.521	3.405
Total Washington County Fatalities (All Crashes) FARS	22	34	24	18	21
Total Washington County Serious Injuries ECRASH	106	122	150	143	140
Total Washington County Population - July 1 Census ACS Est.	224,434	228,482	232,732	236,611	239,187
Washington County Annual Vehicle Miles Traveled	1,966,612,335	2,031,306,588	2,074,622,405	2,111,235,190	2,170,837,500
Washington County Fatalities Per 100,000 Population	9.80	14.88	10.31	7.61	8.78
Washington County Fatalities per 100,000 Million Vehicle Miles Traveled	1.119	1.674	1.157	0.853	0.967
Washington County Serious Injuries Per 100,000 Population	47.23	53.40	64.45	60.44	58.53
Washington County Serious Injuries per 100,000 Million Vehicle Miles Traveled	5.390	6.006	7.230	6.773	6.449
Total Benton & Washington County Fatalities (All Crashes)	47	64	39	36	44
Total Benton & Washington County Serious Injury (All Crashes)	199	274	301	278	223
Total Two-County Population - July 1 Census ACS Est.	476,025	487,694	499,317	508,877	518,328
Two County Annual Vehicle Miles Traveled	4,257,101,945	4,395,166,266	4,468,723,470	4,556,395,740	4,608,084,120
Two-County Fatalities Per 100,000 Population	9.87	13.12	7.81	7.07	8.49
Two-County Fatalities per 100,000 Million Vehicle Miles Traveled	1.104	1.456	0.873	0.790	0.955
Two-County Serious Injuries Per 100,000 Population	41.80	56.18	60.28	54.63	43.02
Two-County Serious Injuries per 100,000 Million Vehicle Miles Traveled	4.675	6.234	6.736	6.101	4.839

Performance Measures, Targets, and System Performance Report

(MPO Supported ARDOT, MODOT, Ozark Transit Authority, and Razorback Transit -Targets)

In compliance with 23 U.S.C. 150 and 23 CFR 490, State DOTs are required to submit biennial performance reports for recurring four-year performance periods starting in 2018. In 2018, both State DOTs set 2-year targets and 4-year targets for all performance measures in Performance Measure Rules No. 2 and No. 3 (PM2 & PM3) in coordination with NWARPC. The first performance period takes place from January 1, 2018 to December 31, 2022. There is a total of three progress reports due for each performance period.

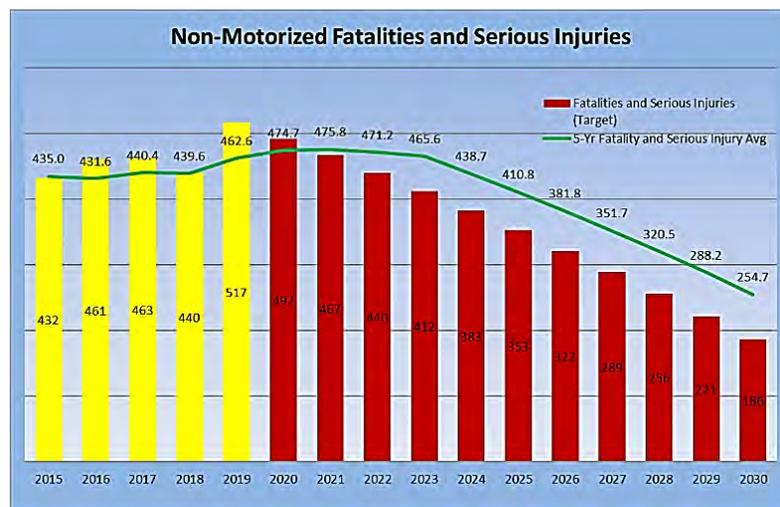
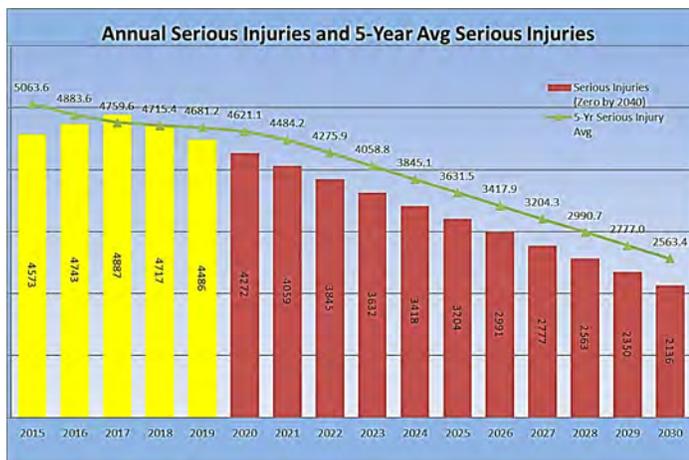
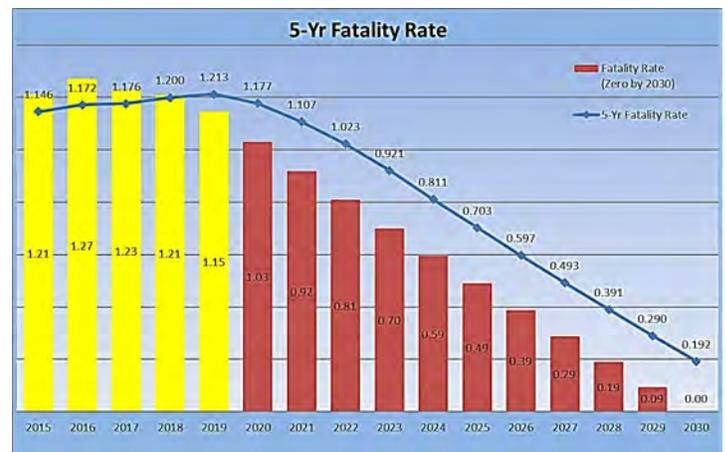
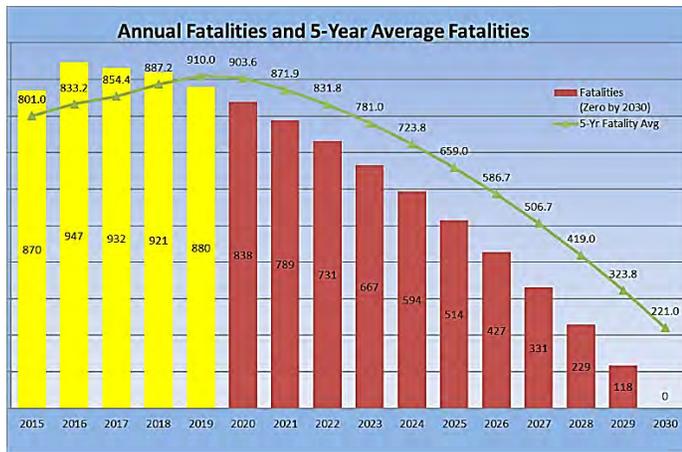
- Baseline Performance Report (submitted October 1, 2018)
- Mid-Performance Period Progress Report (October 1, 2020)
- Full Performance Period Progress Report (October 1, 2022)

Both State DOTs are required to coordinate with NWARPC on the selection of targets to ensure consistency, to the maximum extent practicable. The following table provides the initial baseline and adjusted 2020 targets by both State DOT’s and all required targets have been adopted by the NWARPC by Resolution to support the ARDOT and MoDOT statewide targets.

NWARPC SUPPORTED ARDOT AND MoDOT TARGETS Northwest Arkansas Regional Planning Commission - September 26, 2018 - Res. No. 2018-13 Northwest Arkansas Regional Planning Commission - 2020 Safety Targets - January 22, 2020 - Res. No 2020-01 Northwest Arkansas Regional Planning Commission - 2021 Safety Targets And Mid-Performance Report Target Adjustments - December 2, 2020 - Res. No. 2020-07										
SAFETY	MoDOT	MoDOT	MoDOT	MoDOT	MoDOT	ARDOT	ARDOT	ARDOT	ARDOT	ARDOT
	Baseline	CY 2018	CY 2019	CY 2020	CY 2021	2013-2017 Baseline	CY 2018	CY 2019	CY 2020	CY 2021
Number of Fatalities	910.0	857.7	872.3	859.3	871.6	514.4	555	543	541.2	536.3
Fatality Rate per 100 Million VMT	1.213	1.163	1.160	1.130	1.119	1.474	1.662	1.615	1.595	1.560
Number of Serious Injuries	4,681.2	4,559.3	4,433.8	4,505.4	4,463.9	2,991.2	3,470.0	3,637.0	3,201.4	3,103.8
Serious Injury Rate per 100 Million VMT	6.241	6.191	6.168	5.953	5.829	8.584	10.419	10.824	9.441	9.043
Number of Non-Motorized Fatalities and Serious Injuries	462.2	431.9	445.4	437.4	462.2	149	149	170	300.3	220.3
PAVEMENTS	MoDOT	MoDOT	MoDOT	MoDOT		ARDOT	ARDOT	ARDOT	ARDOT	ARDOT
	Baseline	2-year	4-year	2021 Target		(IRI Only) Baseline (2018)*	(IRI Only) 2-year (2020)	(IRI Only) 4-year (2022)	(IRI Only) 2020 Mid-Performance Report - Current	(IRI Only) 2022 Mid-Performance Report
Percentage of Interstate Pavements in Good Condition	77.5%		77.5%	77.5%		77.0%		79.0%	78.0%	79.0%
Percentage of Interstate Pavements in Poor Condition	0.1%		0.0%	0.1%		4.0%		5.0%	4.0%	5.0%
Percentage of non-Interstate NHS Pavements in Good Condition	61.1%	61.1%	61.1%	61.1%		52.0%	48.0%	44.0%	56.0%	59.0%
Percentage of non-Interstate NHS Pavements in Poor Condition	1.0%	1.0%	1.0%	1.0%		8.0%	10.0%	12.0%	8.0%	7.0%
BRIDGE	MoDOT	MoDOT	MoDOT	Revised MoDOT		ARDOT (2018)	ARDOT	ARDOT	ARDOT 2020 Mid- Performance Report	ARDOT 2022 Mid-Performance Report
	Baseline	2-year	4-year	2021 Target		Baseline	2-year	4-year	Current 2020	4-Year
Percent of NHS bridges by deck area classified as Good condition	34.0%	30.9%	30.9%	26.4%		50.3%	50.0%	50.0%	44.5%	42.00%
Percent of NHS bridges by deck area classified as Poor condition	7.1%	7.1%	7.1%	8.2%		3.9%	4.0%	6.0%	3.6%	6.00%
TRAVEL TIME RELIABILITY	MoDOT	MoDOT	MoDOT	Revised MoDOT		ARDOT (2018)	ARDOT	ARDOT	ARDOT 2020 Mid- Performance Report	ARDOT Mid-Performance Report
	Baseline	2-year	4-year	2021 Target		Baseline	2-year	4-year	Current 2020	4-Year
Interstate Travel Time Reliability Measure: Percent of Reliable Person-Miles Traveled on the Interstate	91.6%	88.9%	87.1%	87.1%		95.0%	91.0%	89.0%	97.0%	93.0%
Non-Interstate Travel Time Reliability Measure: Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS	92.3%		87.8%	87.8%		96.0%		90.0%	96.0%	92.0%
Freight Reliability Measure: Truck Travel Time Reliability Index	1.25	1.28	1.30	1.45		1.21	1.45	1.52	1.21	1.40

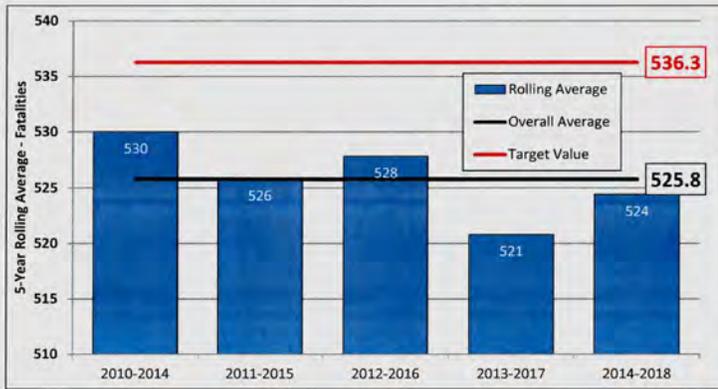
NWARPC continues to program projects in the Transportation Improvement Program in order to achieve progress in meeting performance targets. The following charts provide statewide performance data and progress for each target compared to previous reports, including baseline data.

Missouri Safety Progress



Arkansas Safety Progress

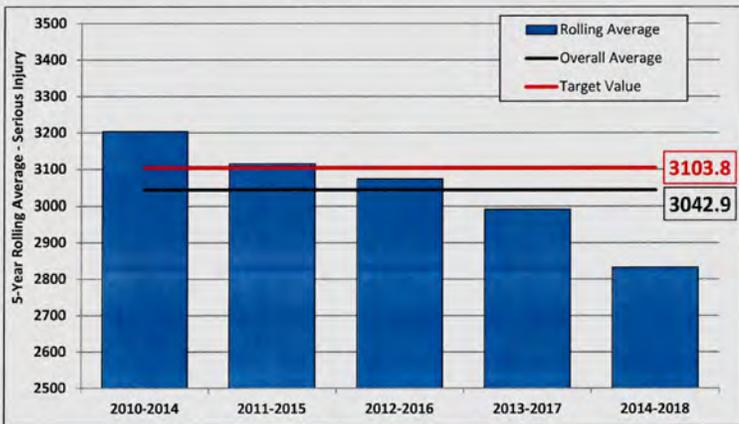
HSIP 2021 Target – Number of Fatalities



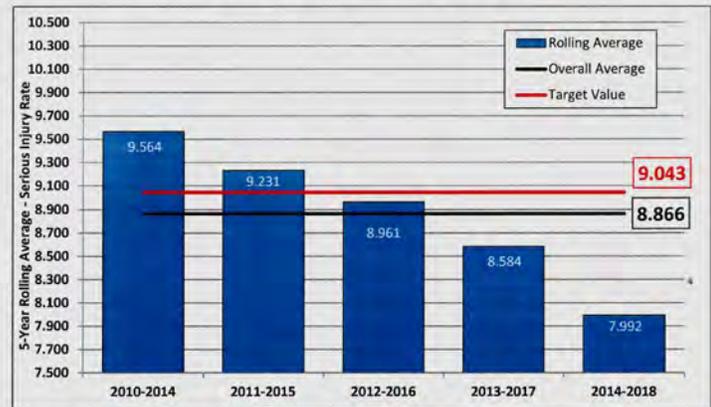
HSIP 2021 Target – Fatality Rate



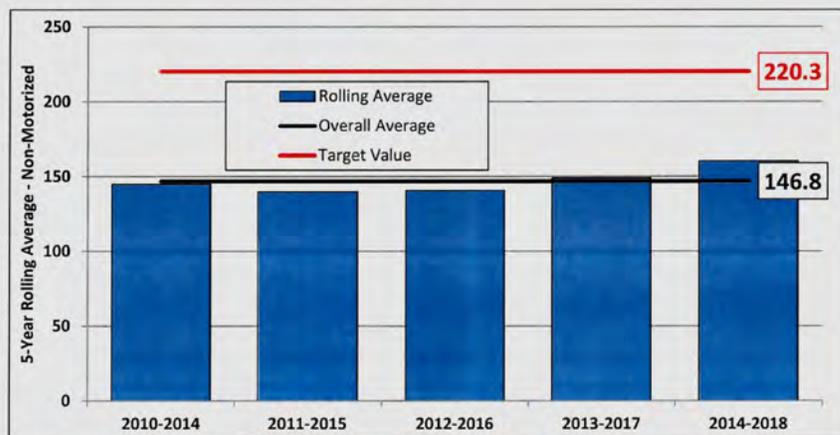
HSIP 2021 Target – Number of Serious Injuries



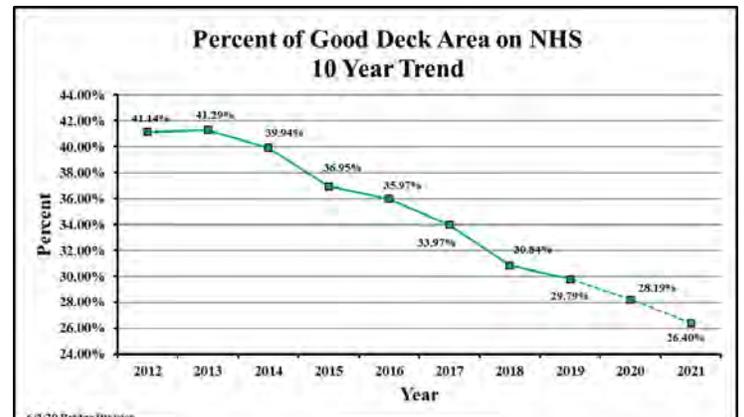
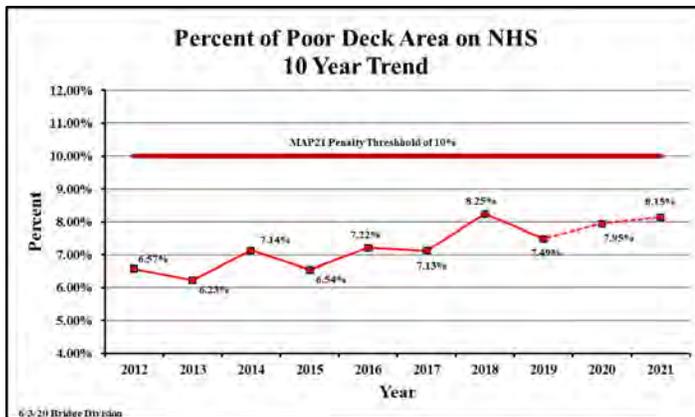
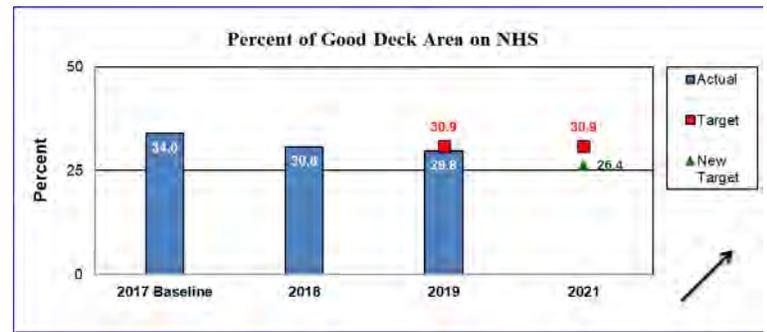
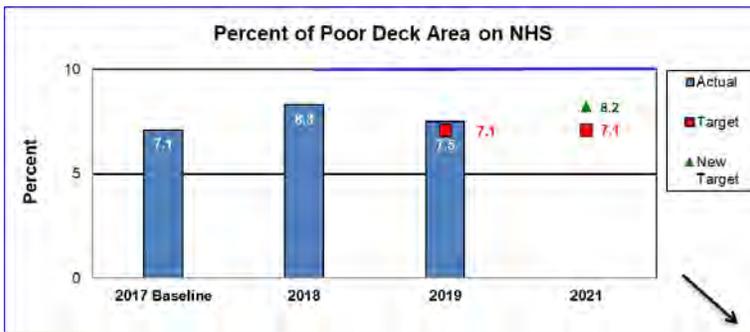
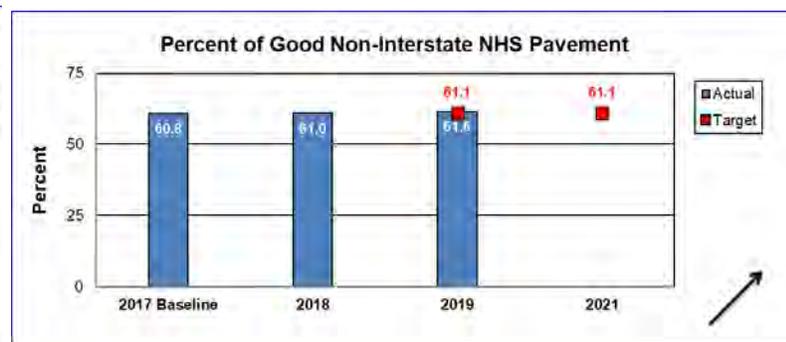
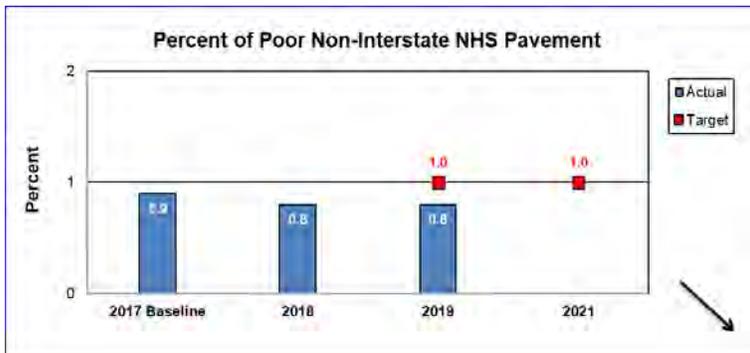
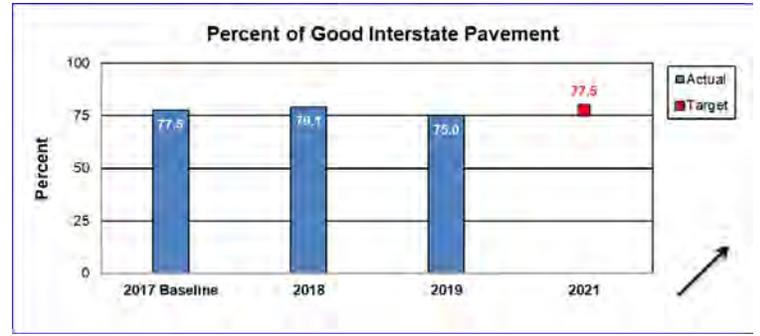
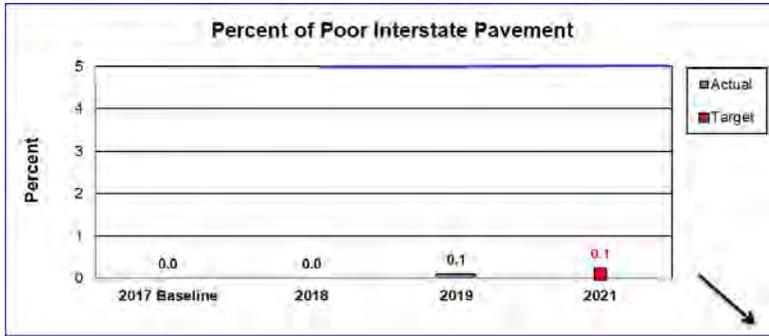
HSIP 2021 Target – Serious Injury Rate



HSIP 2021 Target - Number of Non-Motorized Fatalities and Serious Injuries



Missouri Pavement and Bridge Deck Progress

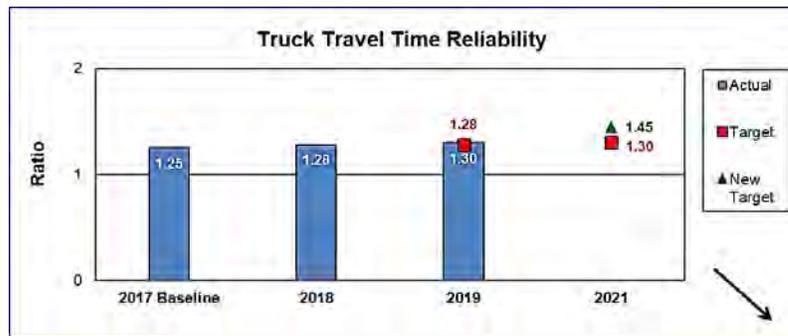
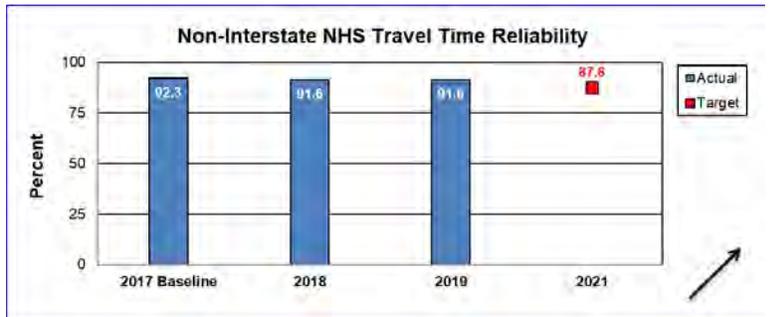


Arkansas Pavement and Bridge Deck Progress

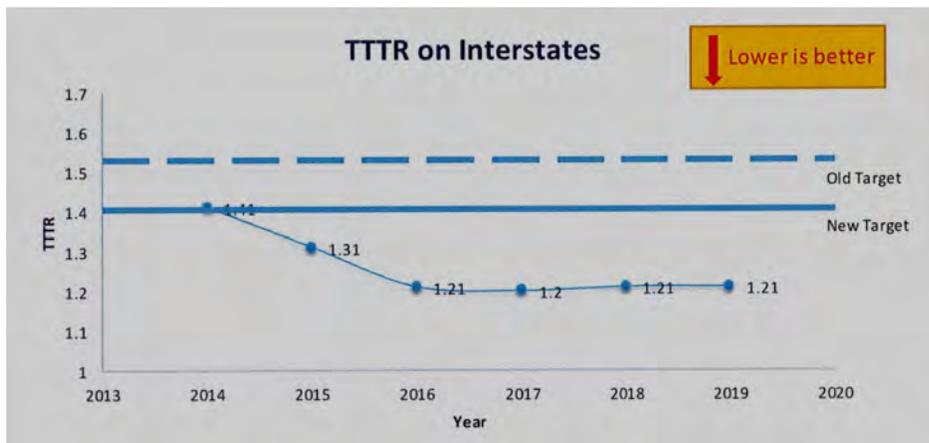
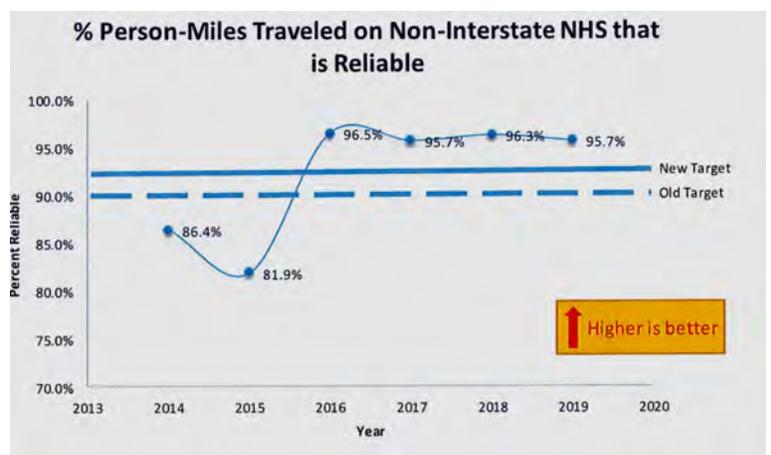
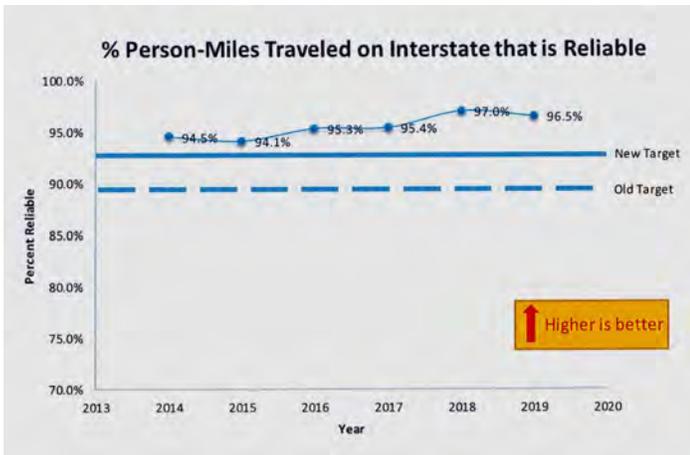
2018 Baseline Performance Report (IRI Only)			
	Baseline (2018) *	2-year (2020)	4-year (2022)
Percent of Interstate pavements in Good condition	77%	N/A	79%
Percent of Interstate pavements in Poor condition	4%	N/A	5%
Percent of non-Interstate NHS pavements in Good condition	52%	48%	44%
Percent of non-Interstate NHS pavements in Poor condition	8%	10%	12%
2020 Mid-Performance Report (IRI Only)			
		Current (2020) ^	4-year (2022) #
Percent of Interstate pavements in Good condition		78%	79%
Percent of Interstate pavements in Poor condition		4%	5%
Percent of non-Interstate NHS pavements in Good condition		56%	59%
Percent of non-Interstate NHS pavements in Poor condition		8%	7%
* Condition rating based on ARDOT's 2017 HPMS pavement dataset – IRI Only			
^ Condition rating based on ARDOT's 2019 HPMS pavement dataset – IRI Only			
# Condition rating based on ARDOT's 2021 Projected pavement dataset – IRI Only			

2018 Baseline Performance Report			
	Baseline (2018)	2-year (2020)	4-year (2022)
Percent of NHS bridges by deck area classified as Good condition	50.3%	50.0%	50.0%
Percent of NHS bridges by deck area classified as Poor condition	3.9%	4.0%	6.0%
2020 Mid-Performance Report			
		Current (2020)	4-year (2022)
Percent of NHS bridges by deck area classified as Good condition		44.5%	42.0%
Percent of NHS bridges by deck area classified as Poor condition		3.6%	6.0%

Missouri Reliability Progress



Arkansas Reliability Progress



PUBLIC TRANSPORTATION AGENCY SAFETY PLANS

The Federal Transit Agency (FTA) published a final rule on July 19, 2018 for Public Transportation Agency Safety Plans as authorized by the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America’s Surface Transportation (FAST) Act. The final rule requires states and certain operators of public transportation systems that receive federal financial assistance under 49 U.S.C. Chapter 53 to develop Public Transportation Agency Safety Plans (PTASP). Each PTASP must:

- Include the documented processes and procedures for the transit agency’s Safety Management Systems (SMS), which consists of four main elements: (1) Safety Management Policy (including performance measures and targets), (2) Safety Risk Management, (3) Safety Assurance, and (4) Safety Promotion (49 CFR 673.11(a)(2));
- Include performance targets based on the safety performance criteria established under the National Public Transportation Safety Plan (49 CFR 673.11(a)(3));
- Address all applicable requirements and standards as set forth in FTA’s Public Transportation Safety Program and National Public Transportation Safety Plan (49 CFR 673(q)(4)); and
- Establish a process and timeline for conducting an annual review and update of the Public Transportation Agency Safety Plan (49 CFR 673.11(a)(5)).

To improve public transportation safety to the highest practicable level in the State of Arkansas and comply with FTA requirements, ARDOT developed individual Public Transit Agency Safety Plans (PTASP) for Ozark Transit Authority (ORT) and University of Arkansas Razorback Transit (Razorback Transit) in collaboration with NWARPC, the MPO for the region, and both transit agencies. The ORT PTASP was adopted on June 25, 2020, and the Razorback Transit PTSAP was adopted on June 29, 2020. ARDOT certified on July 20, 2020 that both transit agencies’ plans are in full compliance with 49 CFR Part 673.

Transit agencies must make their safety performance targets available to States and Metropolitan Planning Organizations (MPO) to aid in the planning process. NWARPC is reflecting the transit agencies’ targets in the Metropolitan Transportation Plan (MTP), and supports linking investment priorities from the Transportation Improvement Program (TIP) to achieve transit performance targets.

Baseline 2018 Ozark Regional Transit and 2019 Razorback Transit Safety Performance Measures	Fatalities	Rate of Fatalities*	Injuries	Rate of Injuries*	Safety Events	Rate of Safety Events*	Mean Distance Between Major Mechanical Failure
Razorback Transit Fixed Route (Bus)	0	0	5	0.0000019	6	0.0000023	378,555
Ozark Regional Transit Fixed Route (Bus)	0	0	0	0	0	0	26,244
Razorback Transit Demand Response	0	0	2	0.000007	2	0.000007	286,140
Ozark Regional Transit Demand Response	0	0	0	0	0	0	29,194

Mode Fixed Route (Bus) Safety Performance Targets	Baseline	Target
Razorback Transit (Bus) Fatalities	0	0
Ozark Regional Transit (Bus) Fatalities	0	0
Razorback Transit (Bus) Rate of Fatalities*	0	0
Ozark Regional Transit (Bus) Rate of Fatalities	0	0
Razorback Transit (Bus) Injuries	5	5
Ozark Regional Transit (Bus) Injuries	0.2	0
Razorback Transit (Bus) Rate of Injuries*	0.0000019	0.0000019
Ozark Regional Transit (Bus) Rate of Injuries	0.00003	0.00000
Razorback Transit (Bus) Safety Events	6	6
Ozark Regional Transit (Bus) Safety Events	0.2	0
Razorback Transit (Bus) Rate of Safety Events*	0.0000023	0.0000023
Ozark Regional Transit (Bus) Rate of Safety Events	0.00003	0.00000
Razorback Transit (Bus) Mean Distance Between Major Mechanical Failure	378,555	378,555
Ozark Regional Transit (Bus) Mean Distance Between Major Mechanical Failure	17,233	0
*Rate = total number for the year/total revenue vehicle miles traveled		

Mode Demand Response	Baseline	Target
Razorback Transit Fatalities	0	0
Ozark Regional Transit Fatalities	0	0
Razorback Transit Rate of Fatalities*	0	0
Ozark Regional Transit Rate of Fatalities	0	0
Razorback Transit Injuries	2	2
Ozark Regional Transit Injuries	0	0
Razorback Transit Rate of Injuries*	0.000007	0.000007
Ozark Regional Transit Rate of Injuries	0	0
Razorback Transit Safety Events	2	2
Ozark Regional Transit Safety Events	0.2	0
Razorback Transit Rate of Safety Events*	0.000007	0.000007
Ozark Regional Transit Rate of Safety Events	0.00008	0
Razorback Transit Mean Distance Between Major Mechanical Failure	286,140	286,140
Ozark Regional Transit Mean Distance Between Major Mechanical Failure	39,997	0
Razorback Transit Other	NA	NA
Ozark Regional Transit Other	NA	NA
*Rate = total number for the year/total revenue vehicle miles traveled		

TRANSIT ASSET MANAGEMENT

The Federal Transit Administration issued a final rule on Transit Asset Management (TAM) that became effective on October 1, 2016. This final rule requires public transportation providers to develop and implement a Transit Asset Management plan. The TAM plan must include, at a minimum, an asset inventory, condition assessments of inventoried assets, description of a decision support tool and a prioritized list of investments to improve the state of good repair of their capital assets.

Asset Category		FY2019	FY2020	FY2021	FY2022	FY2023
Revenue Vehicles						
Age - % of revenue vehicles within a particular asset class that have exceeded their age ULB	<i>BU - Bus</i>	25%	25%	20%	20%	20%
	<i>CU - Cutaway Bus</i>	25%	25%	20%	20%	20%
	<i>MV - Mini-van</i>	25%	25%	20%	20%	20%
Mileage - % of revenue vehicles within a particular asset class that have exceeded their mileage ULB	<i>BU - Bus</i>	25%	25%	20%	20%	20%
	<i>CU - Cutaway Bus</i>	25%	25%	20%	20%	20%
	<i>MV - Mini-van</i>	25%	25%	20%	20%	20%
Cumulative Condition Score - % of revenue vehicles within a particular asset class that score below 2.0 on the TERM Scale	<i>BU - Bus</i>	25%	25%	20%	20%	20%
	<i>CU - Cutaway Bus</i>	25%	25%	20%	20%	20%
	<i>MV - Mini-van</i>	25%	25%	20%	20%	20%
Equipment						
Cumulative Condition Score - % of non-revenue vehicles within a particular asset class that score below 2.0 on the TERM Scale	<i>Non-Revenue/Service Vehicle</i>	50%	50%	50%	50%	50%
Facilities						
Condition Score - % of Facilities that score below 2.0 on the TERM Scale	<i>Administration</i>	25%	25%	25%	25%	25%
	<i>Maintenance</i>	25%	25%	25%	25%	25%
	<i>Passenger Facilities</i>	25%	25%	25%	25%	25%

Transit providers are required to set performance targets for their capital assets based on SGR measures and report their targets, as well as information related to the conditions of their capital assets, to the National Transit Database.

In addition, FTA has required that MPO's approve performance targets for the TAM Plan within 180 days of the TAM plan approvals for the agencies. Per FTA guidance, one set of performance targets is recommended for the region as opposed to individual goals for each agency represented in the MPO area.

In coordination with Ozark Regional Transit and Razorback Transit, the following table details the performance targets for each of the asset classes required in the TAM Plans.

ANTICIPATED EFFECT OF THE NARTS FFY 2021-2024 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) TOWARD ACHIEVING THE PERFORMANCE TARGETS

PERFORMANCE-BASED APPROACH – METROPOLITAN TRANSPORTATION PLANNING

The FAST Act includes requirements for the MPO to establish and use a “performance-based approach to transportation decision making” that supports FAST Act National Goals. The NARTS MPO continues to coordinate with ARDOT and MoDOT on the establishment of a “performance-based approach” to transportation planning and the establishment of MPO “performance measures and performance targets” that support state DOT performance measures and targets.

ARDOT and MoDOT, in accordance with 23 CFR 450.218, have each developed a statewide Transportation Improvement Program (STIP) that includes, to the maximum extent practicable, a discussion of the anticipated effect of the STIP toward achieving identified performance targets. These targets are identified in statewide long-range transportation plans, or other state performance-based plan(s) that link investment priorities to those performance targets.

NWARPC passed Resolution No. 2018-13, Resolution No. 2020-01, and Resolution No. 2020-07 supporting both ARDOT's and MoDOT's established performance targets. NWARPC has agreed to plan and program projects in support of the performance targets for Safety, Pavement Condition, Bridge Condition, and Travel Time Reliability. NWARPC has passed Resolution No. 2018-12 and Resolution No. 2020-12 supporting the TAM and Safety Targets for Ozark Transit Authority and Razorback Transit.

ANTICIPATED EFFECT OF THE ARDOT STIP/NARTS TIP TOWARD ACHIEVING THE PERFORMANCE TARGETS:

1) Safety

Since 2013, Arkansas has adopted an ultimate vision of Toward Zero Deaths (TZD). The Strategic Highway Safety Plan (SHSP) was developed with the TZD vision, and integrated the four “E's” – engineering, education, enforcement, and emergency services. The SHSP is a performance-based, data-driven, comprehensive plan that established statewide goals, objectives, and strategies to address safety in Arkansas. The vision and strategy included in the SHSP is consistent with the TZD National Strategy on Highway Safety sponsored by the FHWA, AASHTO, the National Highway Traffic Safety Administration (NHTSA), and the Governor's [For more information visit this link.](#)

2)

The 2017 SHSP identified five **critical emphasis areas** including Driver Behavior; Infrastructure Improvement; Special Road Users; Vulnerable Road Users; and Operational Improvements. Performance goals can be found in the SHSP for the following federally mandated performance measures:

- Number of fatalities
- Fatality rate
- Number of serious injuries
- Serious injury rate
- Number of non-motorized fatalities and serious injuries

Additionally, ARDOT develops annual performance targets to support the SHSP goals in accordance with 23 U.S.C. 150. The targets are developed in coordination with the Arkansas State Police-Highway Safety Office, MPOs, and other stakeholders. The targets are submitted to FHWA in the Highway Safety Improvement Program (HSIP) report by August 31 each year.

The 2017 SHSP relevant **primary emphasis areas** under the critical emphasis areas of Infrastructure and Operational Improvements include roadway departure, intersections, work zones, railroad crossings as well as incident management and data collection and analysis. Safety projects included in the STIP/TIP were identified to address the critical and primary emphasis areas in support of the SHSP performance goals. These projects were identified through a data-driven process, and are in conformance with the HSIP requirements. The process includes:

- Evaluation of the safety performance of an area
- Identification of appropriate countermeasures that would address one or more SHSP primary emphasis areas
- Determination of benefits versus costs

These projects are intended to move the State toward achieving the performance goals identified in the SHSP through a positive effect on the State’s highway safety performance. An evaluation of safety effectiveness for these projects is conducted annually through the HSIP report.

2) Transit

The NARTS MPO is required, through Transit Asset Management Plans (TAMs) and Public Transit Agency Safety Plans (PTASP), to coordinate with transit providers (ORT and Razorback Transit), set performance targets, and integrate those performance targets and performance plans into its planning document(s).

FTA grant recipients are required to utilize performance-driven, outcome-based programs. As part of this approach, recipients are required to link investment priorities from the STIP/TIP to achieve performance targets based upon the grant recipient’s TAM and PTASP plans.

3) Infrastructure Condition

In order to manage the State Highway System, ARDOT has developed the Transportation Asset Management Plan (TAMP) compliant with 23 CFR 515 with the goal of maintaining the system in the best possible condition for the given amount of funding available. The TAMP is a risk-based document and describes the inventory and condition of Arkansas highways and bridges located on the National Highway System (NHS). It also describes how ARDOT is managing these assets using transportation asset management principles. Using life-cycle information contained in the TAMP assists ARDOT in identifying the correct projects at the correct times to reduce the overall cost of State assets, while maintaining a safe and efficient system.

Federally mandated performance measures are:

- Percent of Interstate pavements in Good condition
- Percent of Interstate pavements in Poor condition
- Percent of non-Interstate NHS pavements in Good condition
- Percent of non-Interstate NHS pavements in Poor condition
- Percent of NHS bridges by deck area classified as Good condition
- Percent of NHS bridges by deck area classified as Poor condition

A number of jobs in the STIP/TIP, in accordance with the TAMP, will implement system preservation, reconstruction, or structures and approaches (bridge replacement) type of work. These projects are intended to maintain highway assets in the state-of-good-repair and achieve performance targets.

Preservation projects are implemented expeditiously as needs are identified, and are aided by additional funding made available through various state initiatives. The condition of the State highway system is reported annually to FHWA in the Highway Performance Monitoring System (HPMS).

4) System Reliability and CMAQ (Note: the NARTS MPA does not fall under CMAQ guidelines.)

System reliability on the Interstate and non-Interstate NHS is assessed using FHWA’s National Performance Management Research Data Set (NPMRDS) for travel time reliability and freight movement. **Travel time reliability** is defined as the ratio of the longer travel time (80th percentile) to a normal travel time (50th percentile). Roadway segments that have a travel time reliability greater than 1.5 are considered unreliable. **Freight reliability** is based on the truck travel time reliability index that is defined as the 95th percentile truck travel time divided by the 50th percentile truck travel time.

Federally mandated performance measures are:

- Percent of person-miles traveled on the Interstate that are reliable
- Percent of person-miles traveled on the non-Interstate NHS that are reliable
- Truck travel time reliability on the Interstate System
- Other measures are not applicable in the NARTS MPA

The Connecting Arkansas Program (CAP) has been the primary vehicle to increase the reliability of the State highway system. Many of the unreliable segments across the State will be addressed with the completion of CAP. The State highways are monitored continuously to ensure a safe and efficient transportation system is provided. As needs arise, projects are identified and implemented. System performance is reported annually to FHWA through the Highway Performance Monitoring System (HPMS). Arkansas State Freight Plan Executive Summary. [For more information visit this link.](#)

ANTICIPATED EFFECT OF THE MODOT STIP/NARTS TIP/ NWARPC MTP 2045 TOWARD ACHIEVING THE PERFORMANCE TARGETS:

1) Safety

While maintaining the existing transportation system remains a priority, MoDOT is also committed to making safety improvements to the system in order to reduce the number of fatalities and serious injuries on Missouri roadways. In 2019 there were 811 traffic fatalities and the 10-year fatality total for the state was 8,506. MoDOT, in conjunction with the Missouri Coalition for Roadway Safety, has developed a **strategic highway safety plan**, *Show-Me ZERO – Driving Missouri Toward Safer Roads*, that identifies emphasis areas and corresponding strategies for reducing fatalities and serious injuries. While *Show-Me Zero* continues a multi-disciplined approach to safer roads through education, public policy, enforcement, engineering and emergency response, a focus on addressing four key behaviors during the next five years has been added: occupant protection, distracted driving, speed and aggressive driving, and impaired driving. Additionally, the plan focuses on three roadway user groups: teen drivers, older drivers, pedestrians and other non-motorized users. *Show-Me Zero* continues the ultimate goal of achieving zero traffic fatalities. Interim goals for 2020 of 838 fatalities and for 2021 789 fatalities, or fewer, have also been established. Reducing fatalities and serious injuries requires effort from partners throughout the state across multiple disciplines. MoDOT is committed to improving safety through both transportation projects and outreach efforts alongside its safety partners. In the 2020-2024 STIP, MoDOT has programmed approximately \$170.6 million in the first three years to help move MoDOT towards the federal safety performance targets. Missourians expect to get to their destinations on time, without delay regardless of their choice of travel mode. MoDOT coordinates and collaborates with its transportation partners throughout the state to keep people and goods moving freely and efficiently.

2) Infrastructure Condition

MoDOT has adopted a statewide transportation asset management approach to make the best decisions with transportation investments. MoDOT’s **Asset Management Plan (AMP)** is a crucial element in achieving MoDOT’s strategic **goal of keeping roads and bridges in good condition**. The AMP is a rolling 10-year strategic framework for making cost-effective decisions about allocating resources and managing road and bridge system infrastructure. It is based on a process of monitoring the physical condition of assets and predicting deterioration over time and providing information on how to invest in order to meet asset management goals.

The AMP objective is to keep the state’s transportation assets in good condition over the life cycle of those assets at the most practical cost. Based on current funding constraints, the goal of the AMP is to maintain existing pavement and bridge conditions. In the 2020-2024 STIP, MoDOT has programmed approximately \$2.7 billion in the first three years to move MoDOT towards the federal bridge and pavement performance targets. MoDOT AMP Summary: [https://epg.modot.org/index.php/121.5 Asset Management](https://epg.modot.org/index.php/121.5_Asset_Management)

3) System Reliability

System performance on the Interstate and non-Interstate National Highway System (NHS) is measured and assessed using a combination of Federal Highway Administration’s (FHWA) National Performance Management Research Data Set (NPMRDS) and other traffic data made available to the department. These data sets allow MoDOT to assess congestion, travel time reliability, and freight movement along the state’s most heavily traveled roadways. Unreliable roadways are generally the result of variable events that adversely impact travel. Specifically, a high frequency of crashes or ongoing construction that block travel lanes can have significant impacts on the reliability of a roadway. Likewise, adverse weather and spikes in traffic volumes and for large events (concerts, sporting events, festivals) can also lead to unreliable conditions. The majority of STIP projects are designated for preserving the condition of the state’s road and bridge conditions. However, where funding allows, MoDOT programs projects aimed at improving reliability and reducing congestion on the busiest corridors in the state. In some cases, this can mean individual construction projects aimed at improving the safety, capacity, and efficiency of a roadway. In addition, MoDOT funds system management and operations functions to help improve reliability. These functions include services such as Transportation Management Centers in St. Louis, Kansas City, and Springfield, emergency response crews on the state’s major highways, and intelligent transportation systems to provide customers with real-time information to increase the likelihood of a reliable trip. In the 2020-2024 STIP, MoDOT has programmed projects and services to move MoDOT towards the federal system reliability and congestion performance targets.

MoDOT has also developed a statewide freight plan to help the department make smarter decisions and investments to optimize Missouri’s ability to move products throughout the state. The freight plan, updated in 2017, will help the state better prepare for necessary improvements to facilitate a reliable movement of goods well into the future. In the 2020-2024 STIP, MoDOT has programmed projects to move MoDOT towards the federal freight performance target.

2017 Missouri State Freight Plan: <https://www.modot.org/freight-plan> Source: MoDOT 2020-2024 STIP
https://www.modot.org/sites/default/files/documents/Sec02Introduction_3.pdf

PROJECTS ANTICIPATED EFFECT OF THE NARTS TIP TOWARD ACHIEVING THE PERFORMANCE TARGETS

HIGHWAY 112 IMPROVEMENTS

Highway 112 is a two-lane highway that parallels I-49 on the west. It traverses through or near several environmentally sensitive areas, including the Cave Springs Recharge Area. The posted speed limit ranges from 30 to 55 miles per hour, with several areas of reduced advisory speeds located throughout the corridor. It is the only continuous North-South route west of I-49, serving local and regional traffic between Fayetteville and Bentonville, making it crucial for regional mobility.

At the request of the NWARPC, the Arkansas State Highway Commission passed Minute Order 2012-027, which authorized a study of Highway 112 from Fayetteville to Bentonville, a total length of approximately 20 miles. The purpose of the Study was to determine the feasibility of improvements to Highway 112 to address capacity and safety needs that will improve reliability, reduce congestion, reduce serious and fatal crashes and develop an urban arterial that address all modes of transportation.

With the exception of the northernmost portion of Highway 112, the corridor currently has two 10-foot lanes and no shoulders. Due to the continuing urban development in the area, much of the route is transitioning from a rural to an urban setting with almost the entire corridor now located within the city limits of eight cities. The southern portion of the Study area has the highest traffic volumes with approximately 17,000 vehicles per day (vpd) south of

Drake Street (in Fayetteville) and 23,000 vpd at the I-49 interchange. Highway 112 south of Drake Street is also a Razorback Transit bus route.

The improvement alternative considered as part of the Study would widen Highway 112 to four travel lanes, with a complete street cross-section, improve geometry, and provide access management based on FHWA Proven Safety

Strategies to manage access such as adequate driveway spacing, a raised median, and deceleration lanes will be necessary to maximize operations and safety through this corridor.

Highway 112 Projects programmed in the TIP include:

JOB #	FFY	TERMINI
040720	2021	Poplar St. - Drake St. (Fayetteville) (S)
040746	2022	Truckers Dr. – Howard Nickell Rd. (Fayetteville) (S)
012305	2023	Hwy. 412 - Springdale Bypass (S)
04X050	TBD	Fayetteville - Hwy. 412 (S)
04X296	2023	Don Tyson Pkwy. - Hwy. 412 (Springdale & Tontitown)
09X322	2023	Pleasant Grove Rd. - Hwy. 12 (Bentonville & Cave Springs)

NWARPC Supported DOT Performance Targets: Truck Travel Time Reliability, Travel Time Reliability, Number and Rate of Serious Injury and Fatal Crashes, and Pavement Condition.

Hwy 112 Implementation of [FHWA Supported Proven Safety Countermeasures](#):

PROVEN SAFETY COUNTERMEASURES

U.S. Department of Transportation
Federal Highway Administration

Corridor Access Management

Access management refers to the design, application, and control of entry and exit points along a roadway. This includes intersections with other roads and driveways that serve adjacent properties. Thoughtful access management along a corridor can simultaneously enhance safety for all modes, facilitate walking and biking, and reduce trip delay and congestion.

Every intersection, from a signalized intersection to an unpaved driveway, has the potential for conflicts between vehicles, pedestrians, and bicycles. The number and types of conflict points—locations where the travel paths of two users intersect—influence the safety performance of the intersection or driveway.

The following access management strategies can be used individually or in combination with one another:

- Driveway closure, consolidation, or relocation.
- Limited-movement designs for driveways (such as right-in/right-out only).
- Raised medians that preclude across-roadway movements.
- Intersection designs such as roundabouts or those with reduced left-turn conflicts (such as J-turns, median U-turns, etc.).
- Turn lanes (i.e., left-only, right-only, or interior two-way left).
- Lower speed one-way or two-way off-arterial circulation roads.

Successful corridor access management involves balancing overall safety and corridor mobility for all users along with the access needs of adjacent land uses.

SAFETY BENEFITS:

- 5-23%** Reduction in total crashes along 2-lane rural roads
- 25-31%** Reduction in injury and fatal crashes along urban/suburban arterials

Use of roundabouts, raised median, and right-in/right-out driveways can be an effective access management plan.

Source: Highway Safety Manual

→ For more information on this and other FHWA Proven Safety Countermeasures, please visit <https://safety.fhwa.dot.gov/provencountermeasures>

FHWA-SA-17-052

PROVEN SAFETY COUNTERMEASURES

U.S. Department of Transportation
Federal Highway Administration

Roundabouts

The modern roundabout is a type of circular intersection configuration that safely and efficiently moves traffic through an intersection. Roundabouts feature channelized approaches and a center island that results in lower speeds and fewer conflict points. At roundabouts, entering traffic yields to vehicles already circulating, leading to improved operational performance.

Roundabouts provide substantial safety and operational benefits compared to other intersection types, most notably a reduction in severe crashes.

Roundabouts can be implemented in both urban and rural areas under a wide range of traffic conditions. They can replace signals, two-way stop controls, and all-way stop controls. Roundabouts are an effective option for managing speed and transitioning traffic from high-speed to low-speed environments, such as freeway interchange ramp terminals, and rural intersections along high-speed roads.

FHWA encourages agencies to consider roundabouts during new construction and reconstruction projects as well as for existing intersections that have been identified as needing safety or operational improvements.

TWO-WAY STOP-CONTROLLED INTERSECTION TO A ROUNDABOUT

82% Reduction in severe crashes

SIGNALIZED INTERSECTION TO A ROUNDABOUT

78% Reduction in severe crashes

Source: Highway Safety Manual

→ For more information on this and other FHWA Proven Safety Countermeasures, please visit <https://safety.fhwa.dot.gov/provencountermeasures>

FHWA-SA-17-055

I-49 IMPROVEMENTS

In summer 2002, the NWARPC requested that the ARDOT undertake a study of future capacity needs for the I-49 corridor through Washington and Benton Counties. In September 2003, Parsons Transportation Group was selected to perform the Study and it was completed in April 2006.

Interstate 49 is the transportation spine of the Northwest Arkansas region. Due to the rapid growth that is occurring in the region, traffic volumes have grown to levels that are producing urban traffic congestion. The commercial growth of the region has gravitated to the interchanges on I-49, resulting in queues that back up on Interstate ramps to such an extent that they occasionally interfere with Interstate operations. This Study considered Interstate widening, and focused on a study of nineteen interchanges, to recommend short-term, interim and long-term improvements.

The Study examined crash data and found some segments of the Interstate that exceed statewide average crash rates. The crash rates for the cross-roads that are state highways were also considered. Crash rates for these were uniformly very high, but this is seen as indicative of the urban congestion in the vicinity of the interchanges, which are not typical of the data used to develop the statewide crash rates for these facilities.

The Study examined anticipated traffic flow conditions for the year 2024, and found that severe deficiencies can be expected. Freeway and ramp junction conditions were reviewed. Also, the cross-street at each of the 19 interchanges was examined for anticipated traffic flow conditions.

The recommendations in the Study provided the basis for allocating estimated funding resources in past plans and helped guide the CAP and GARVEE Bond planned projects that were ultimately programmed in the TIP. Projects programmed in the TIP include:

<u>JOB #</u>	<u>FFY</u>	<u>TERMINI</u>
040846	2023	Hwy. 62 Intchng. Impvts. (Fayetteville)

NWARPC Supported DOT Performance Targets: Truck Travel Time Reliability, Travel Time Reliability, Number and Rate of Serious Injury and Fatal Crashes, and Pavement Condition.

US 612 (412 NORTHERN BYPASS) (NHS)

The FHWA issued a Record of Decision on February 15, 2006 that approved a Selected Alignment Alternative for the proposed bypass. This project is considered an essential east-west corridor improvement to the highway system in the MPA. While not fully funded in the Constrained List, the project is still considered one of the top priorities in the area.

In 2012, the CAP program was approved by Arkansas voters and included funding for the segment between I-49 and Highway 112 including one-half of the I-49/Highway 412 interchange. The contract was awarded in December 2014 and groundbreaking was held in April 2015 on the \$100 million, 4.57-mile segment. A ribbon cutting ceremony opening the facility occurred on April 18, 2018.

The project has and will continue to improve reliability and safety for freight and commuters by providing a four-lane fully controlled access freeway through the urbanized area and relieving traffic congestion and improving safety on the existing US 412 through Springdale.

US 412 Projects programmed in the TIP include:

<u>JOB #</u>	<u>FFY</u>	<u>TERMINI</u>
012326	2023	Hwy. 412 - Hwy.112 (Springdale Bypass) (S)

NWARPC Supported DOT Performance Targets: Truck Travel Time Reliability, Travel Time Reliability, Number and Rate of Serious Injury and Fatal Crashes, and Pavement Condition.



CHAPTER 9. TRANSPORTATION PROJECTS AND FUNDING

INTRODUCTION

The 2045 Proposed Network and the Constrained and Unconstrained Road Project Lists represent potential roadway and highway improvements in the region. The individual cities and counties also have important projects that will utilize a combination of Federal, State, and local funding. A major component of the 2045 MTP is to take the estimated available funds through the year 2045 and prioritize the potential projects within the limits of the estimated funds. The purpose of developing the Constrained List is to demonstrate fiscal constraint as part of the transportation planning process.

The Constrained List consists of projects that can reasonably be expected to be funded with Federal-aid funds during the 25-year planning period. This is determined by estimates of Federal-aid funds that can reasonably be expected to come to the area given the area's highway network, Urbanized Area, population, etc. These estimates are provided by ARDOT and MoDOT and are not limits, nor are they guarantees of funding. They are conservative, reasonable estimates of future funding to guide development of the 2045 MTP. The costs of the transportation projects in the MTP have been adjusted to represent future inflated construction costs at a rate of 2 percent annually.

The Constrained List of projects in the 2045 MTP necessarily starts with the adopted FFY 2021-2024 TIP which shows the projects that already have Federal, State, and local commitments. The list of TIP projects is included in the [FFY 2021-2024 Transportation Improvement Program \(TIP\)](#) and many of the projects are also represented on various figures and maps throughout the chapter.

SUMMARY OF FEDERAL AID PROGRAMS AND FUNDING

ARDOT has provided Federal funding estimates for transportation projects in the Metropolitan Planning Area (MPA). The estimated totals by period (2025-2030, 2031-2035, and 2036-2045) reflect the estimated Federal funds and required matching funds and have been inflated by 2 percent per year to 2045. Federal-aid Programs include:

- National Highway Performance Program (NHPP)
- Surface Transportation Block Group Program (STBGP)
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Highway Safety Improvement Program (HSIP)
- Railway-Highway Crossings (set-aside from SIP)
- Metropolitan Planning
- Construction of Ferry Boats and Ferry Terminal Facilities
- Transportation Alternatives Program (TAP) – part of STBGP

Public Transportation Programs include:

- Urbanized Area Formula Grants
- Fixed Guideway Capital Investment Grants
- Mobility for Seniors and Individuals with Disabilities
- Formula Grants for Rural Areas
- State of Good Repair Grants
- Bus and Bus Facilities Formula Grants

SUMMARY OF ESTIMATED FUNDS – FFY 2025 to 2045

2025 to 2045 Revenue Estimates Inflated at 2% per Year.		Amount	Percent	Percent	Average/Yr (2025 to 2045)
National Highway Performance Program (NHPP)		\$ 869.68	42.11%		\$ 43.48
Pavement Preservation	\$ 501.82			57.70%	\$ 25.09
Bridge	\$ 217.68			25.03%	\$ 10.88
System Reliability	\$ 177.18			20.37%	\$ 8.86
Surface Transportation Block Grant (STBG)		\$ 755.79	36.59%		\$ 37.79
NWARPC Urbanized > 200K	\$ 288.43			38.16%	\$ 14.42
STBG Flex, City, Town and CMAQ Flex	\$ 428.78			56.73%	\$ 21.44
Off-System Bridge	\$ 38.58			5.10%	\$ 1.93
Surface Transportation Block Grant Transportation Alternatives (STBGP-A)		\$ 63.24	3.06%		\$ 3.16
NWARPC Urbanized > 200K	\$ 18.55			29.33%	\$ 0.93
STBG Flex, City and Town	\$ 39.21			62.00%	\$ 1.96
Recreational Trails	\$ 5.48			8.67%	\$ 0.27
Highway Safety Improvement Plan (HSIP)		\$ 102.10	4.94%		\$ 5.11
Congestion Mitigation and Air Quality (CMAQ) - Non-Attainment		\$ -			
National Highway Freight Program (NFP)13		\$ 33.76	1.63%		\$ 1.69
Transit Urbanized Area Formula Program (49 U.S.C 5307) (Transit Funding)		\$ 217.19	10.52%		\$ 10.86
Transit Bus and Bus Facilities Program (49 U.S.C. 5339) (Transit Funding)		\$ 12.20	0.59%		\$ 0.61
Transit Enhanced Mobility of Seniors and Individuals with Disabilities Program (49 U.S.C. 5310) (Transit Funding)		\$ 7.25	0.35%		\$ 0.36
Transit Rural Area Formula Program (49 U.S.C. 5311) (Transit Funding)		4.1	0.20%		\$ 0.21
<i>*FTA 5307 Assumes 2021 Local Match Continues with 2% increase per year</i>					
Total		\$ 2,065.31	100.00%		

(Millions of dollars of estimated obligation limitation; Federal plus State/Local Match, at 2 percent inflation/year – Note the adopted FFY 2021-2024 TIP funding and associated projects is listed separately and is considered part of the 2045 MTP.)

NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP)

Revenue estimates inflated at 2% a year.

All amounts shown are in millions of dollars and are for Federal funds plus required match. Matching funds are assumed to be provided by the State for most State Highway projects.

Construction costs inflated at an average annual rate of 2% to develop year-of-expenditure estimates.

The NHPP Funds were distributed by the total funding - 90M for the Bridge Program, then the rest was split (90%-10%) between Pavement Preservation and System Reliability respectively.

The Pavement Preservation fund was calculated using the MPO County(ies) percentage of NHS lane miles.

The Bridge Funds were calculated using the MPO boundary percentage of NHS bridge deck area.

The System Reliability Funds were calculated using the MPO County(ies) percentage of unreliable VMT on the NHS.

The STBG Flex, City, Town, and CMAQ Flex Funds are the sum of the STBG Flex, Area with Population over 5k to 200k, Areas with Population 5k and under, and CMAQ Flex.

The STBG Flex, City and Town Funds were distributed by the MPO county(ies) total highway VMT and percent of APHN Mileage

The CMAQ Flex funds were distributed by the MPO county(ies) total highway VMT.

The Off-System Bridge funds were distributed by the MPO county(ies) percentage of off-system bridge deck area (Functional Classes Major Collector and Below).

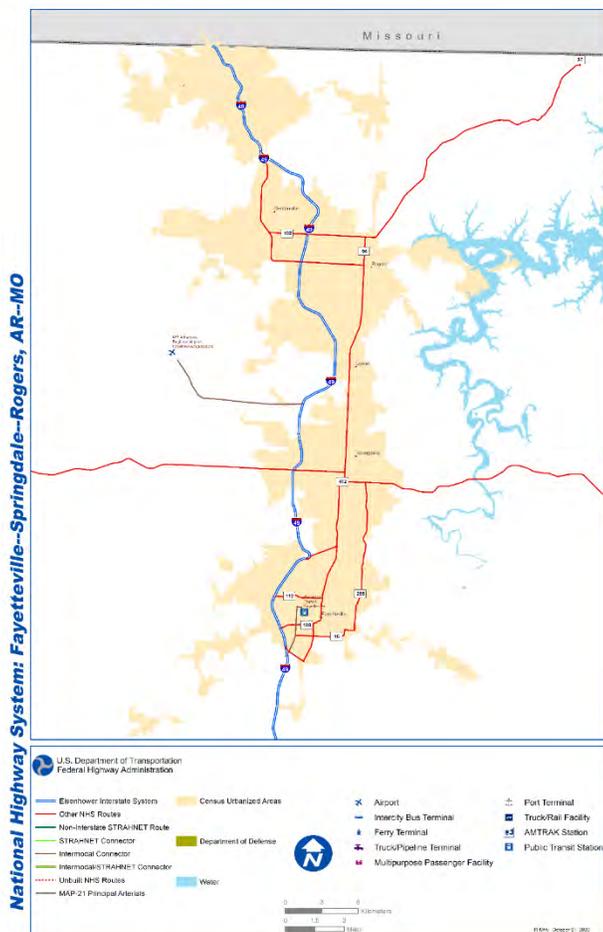
The STBG-TA Flex, City, and Town funds are the sum of the STBG-TA Flex, Area with Population over 5k to 200k, and Areas with Population 5k and under.

The STBG Flex and 2018 City funds were distributed by the MPO's percent of counties size and population, percent population over 5k to 200k, and percent population under 5k.

The Recreational Trails funds were distributed by the MPO's percent of county(ies) size and percent population.

The HSIP funds were distributed by the MPO County(ies) percentage of 2012-2016 KA crashes.

The HFP funds were distributed by the MPO County(ies) percentage of the Arkansas Freight Network mileage.



The NHPP includes the Interstate System, the Enhanced National System Highway (NHS) principal arterials, and other highways that connect to intermodal transportation facilities.

The program provides funding to support the performance and condition of the NHS, new facilities on the NHS, and to direct funding to projects that achieve performance targets as may be established by the ARDOT and MoDOT.

The Enhanced NHS in the MPA includes I-49, Hwy. 71, Hwy. 71B, Hwy. 16 (Fayetteville), Hwy. 180 (Fayetteville), Hwy. 412, Hwy. 62 (Rogers-East Benton County), and the Hwy. 112 Spur (Fayetteville).

Map 9.1 National Highway System (NHS)
Fayetteville-Springdale-Rogers AR-MO

Under MAP-21/FAST Act, both AHTD and MODOT have developed performance-based asset management plans for preserving and improving the condition of the NHS. Required performance measures and standards include:

- Minimum standards in developing and operating bridge and pavement management systems.
- Performance measures for Interstate and NHS pavement condition, NHS bridge condition, and Interstate and NHS performance.
- Minimum conditions for Interstate pavements.
- Data elements necessary to collect and maintain standardized data to carry out a performance-based approach.

The NHPP funding that is apportioned to Arkansas is further allocated by ARDOT into the following funding categories: National Highway System, Bridge, and Interstate Maintenance (IM). The estimated funding that will be available within the Metropolitan Planning Area (Arkansas portion) is shown below:

NHPP Estimated Funding (Federal, plus State match, 2 percent inflation/year):

Time Period (FFY)	NHS Pavement Preservation	Bridge	System Reliability
2025 to 2030	\$122.9	\$53.3	\$43.4
2031 to 2035	\$114.1	\$49.5	\$40.3
2036 to 2045	\$265.0	\$114.9	\$93.6
Total	\$502.0	\$217.7	\$177.3

(Millions of dollars of estimated obligation limitation)

SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBGP)

The STBGP provides funding that may be used on a variety of State and local transportation projects to preserve and improve the condition and performance of the transportation system. A portion of the STBGP funds is required to be used on the off-system bridge program.

The Fayetteville-Springdale-Rogers, AR-MO Urbanized Area receives a portion of the STBGP funding as sub-allocated STBGP-GT 200K Attributable (STBGP-GT 200K) funding. Projects are selected through a competitive process and approved by the RPC/Policy Committee.

STBGP Estimated Funding (Federal, plus local match, 2 percent inflation/year):

Time Period (FFY)	STBGP Flex	Off-System Bridge	STBGP -GT 200K
2025 to 2030	\$ 104.9	\$ 9.4	\$70.6
2031 to 2035	\$ 97.5	\$ 8.8	\$65.6
2036 to 2045	\$ 226.4	\$ 20.4	\$152.3
Total	\$428.78	\$38.58	\$288.43

(Millions of dollars of estimated obligation limitation)

SURFACE TRANSPORTATION BLOCK GRANT APPORTIONMENT FOR URBANIZED AREAS WITH POPULATION GREATER THAN 200,000 (STBGP-GT 200K)

In 2012, the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) designated the Fayetteville-Springdale-Rogers, AR-MO Urbanized Area as a Transportation Management Area (TMA). The TMA designation provides STBGP-GT 200K funds to NWARPC based on the 2010 Census Bureau Urbanized Area population of 295,083. STBGP-GT 200K funds can be utilized for all eligible transportation projects at the discretion of the RPC/Policy Committee.

The RPC/Policy Committee has adopted a policy to focus on Projects of Regional Significance. Regional Significance is defined as an improvement to major routes such as north/south corridors and the east/west corridors and frontage roads that improve access, reduce crash rates, and/or relieve congestion to the north/south routes. A model of the regional arterial system would be the four-lane road network grid shown as the 2045 Proposed Arterial Network in the MTP.

Federal Fiscal Year (FFY) 2013 was the first year NWARPC became eligible for STBGP-GT 200K funds. By the end of 2020, the RPC/Policy Committee had obligated over \$74 million dollars in Federal funds within this region. The Federal share is typically 80 percent and the local share is 20 percent for selected STBGP-GT 200K projects.

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

Safety of the transportation system is one of the national goals for the transportation program. The HSIP provides funding to help reduce the number of fatalities and serious injuries on all public roads – State and non-State. The Federal share is typically 90 percent with the local share at 10 percent.

HSIP Estimated Funding (Federal, plus local match, 2 percent inflation/year):

Time Period (FFY)	HSIP
2025 to 2030	\$ 24.0
2031 to 2035	\$ 23.2
2036 to 2045	\$ 53.9
Total	\$102.1

(Millions of dollars of estimated obligation limitation)

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

MAP-21/FAST Act consolidated the Safe Routes to School, Transportation Enhancements, and Recreational Trails programs into the TAP.

Half of the TAP funds are sub-allocated based on population and the remaining funds are allocated to anywhere in the State. The Urbanized Area, based on 2010 Census Bureau population, receives approximately \$500,000 in funds annually. Past projects have included trailhead and trail construction within the region.

TAP Estimated Funding (Federal, plus local match, 2 percent inflation/year):

Time Period (FFY)	Urbanized	Statewide
2025 to 2030	\$ 4.5	\$ 9.6
2031 to 2035	\$ 4.2	\$8.9
2036 to 2045	\$ 9.8	\$20.7
Total	\$18.55	\$39.22

(Millions of dollars of estimated obligation limitation)

A competitive application process is conducted through ARDOT and NWARPC for each program.

URBANIZED AREA FORMULA PROGRAM (49 U.S.C. §5307) – TRANSIT

FTA apportions Urbanized Area Formula Program funds to designated recipients within urbanized areas with populations of 200,000 or more. NWARPC is the designated recipient for the Fayetteville-Springdale-Rogers AR-MO Urbanized Area.

The Urbanized Area Formula Program Section 5307 provides operating and capital funds to local public transit operators Razorback Transit and Ozark Regional Transit (ORT). MAP-21/FAST Act expanded the use of these funds for operating expenses. Expanded eligibility included operating expenses for transit systems in Urbanized Areas over 200,000 in population.

The region receives approximately \$2,366,978 in Section 5307 Federal funds per year matched by approximately \$1,382,450 in local funds. Funds are utilized by public transit agencies and for transit planning purposes.

Section 5307 Estimated Funding (Federal, plus local match, 2 percent inflation/year):

Time Period (FFY)	Section 5307
2025 to 2030	\$ 47.8
2031 to 2035	\$ 44.4
2036 to 2045	\$ 103.1
Total	\$ 195.3

(Millions of dollars of estimated obligation limitation)

BUS AND BUS FACILITIES PROGRAM (49 U.S.C. §5339) – TRANSIT

MAP-21/FAST Act created a new formula grant program for bus and bus facilities that replaced the 5309 discretionary programs. The program provides funding for replacing, rehabilitating, and purchasing new buses and bus-related equipment and facilities. The Urbanized Area receives approximately \$349,144 annually in Federal funds matched by local funds for the replacement of vehicles and related capital projects. Funding is utilized by both Razorback and ORT for replacing buses.

Competitive Grants: Two discretionary components have been added to the Section 5339 program: A bus and bus facilities competitive program based on asset age and condition, and a low or no emissions bus deployment program. The Bus and Bus Facilities Infrastructure Investment Program, through the Federal Transit Administration, is a discretionary program that makes Federal funding available for the purpose of financing capital bus and bus-related projects which will support the continuation and expansion of public transportation services in the United States. The Bus Discretionary program allows states and transit agencies to construct bus-related facilities.

ORT received a \$2.9 million grant award in 2018 to replace its administration and operations center. ORT staff moved into the new facility in December 2020. The new facility has improved safety and accessibility, and can accommodate growing demand for transit service in Northwest Arkansas. Additionally, ORT received \$3.6 million in 2018 to aid in replacing its bus fleet, after it was destroyed by a fire.

Section 5339 Estimated Funding (Federal, plus local match, 2 percent inflation/year):

Time Period (FFY)	Section 5339
2025 to 2030	\$ 2.6
2021 to 2030	\$ 2.4
2031 to 2045	\$ 5.6
Total	\$ 10.6

(Millions of dollars of estimated obligation limitation)

ENHANCED MOBILITY OF SENIORS AND INDIVIDUALS WITH DISABILITIES PROGRAM (49 U.S.C. §5310) – TRANSIT

Enhanced Mobility of Seniors and Individuals with Disabilities Program is a formula assistance program to improve mobility for seniors and individuals with disabilities. Public transportation projects may be implemented in areas where public transportation is insufficient, inappropriate, or unavailable; public transportation projects that exceed the requirements of the Americans with Disabilities Act (ADA); projects that improve access to fixed-route service and decrease reliance on complementary paratransit; and alternatives to public transportation projects that assist seniors and individuals with disabilities.

Section 5310 Estimated Funding (Federal, plus local match, 2 percent inflation/year):

Time Period (FFY)	Section 5310
2025 to 2030	\$ 1.5
2031 to 2035	\$ 1.5
2036 to 2045	\$ 3.3
Total	\$ 6.3

(Millions of dollars of estimated obligation limitation)

RURAL AREA FORMULA PROGRAM (49 U.S.C. §5311) – TRANSIT

The Rural Area Formula Program is a formula grant program that provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000. Currently, ORT receives approximately \$140,000 per year in Federal funds and requires a 20 percent to 50 percent local match depending on the type of project. ORT provides demand response service to the rural areas within the Metropolitan Planning Area.

Section 5311 Estimated Funding (Federal, plus local match, 2 percent inflation/year):

Time Period (FFY)	Section 5311
2025 to 2030	\$ 0.875
2031 to 2035	\$ 0.804
2036 to 2045	\$ 1.868
Total	\$ 3.537

(Millions of dollars of estimated obligation limitation)

GOVERNOR’S LONGTERM HIGHWAY FUNDING PLAN

In 2012, 58 percent of the Arkansas voters approved a constitutional amendment and passed a temporary ten-year ½ cent sales tax. The State sales tax increased from 6 percent to 6.5 percent and generated approximately \$1.8 billion in funding for the ten-year transportation program. The tax was anticipated to sunset after the ten-year bonds are paid off in 2023 or before.

During the 2019 Legislative Session to address transportation funding, the Governor’s Long Term Highway Funding Plan was presented to the Legislature. The plan was a combination of two components – Act 416 and Issue 1 – to fund state highway, county road and city street improvements.

In 2019, the State Legislature Enacted Act 416 and provides additional funding that is dedicated to system preservation. The Act levied a wholesale sales tax on motor fuel and distillate special fuel that results in a 3 cents per gallon increase (24.5 cents per gallon total) and 6 cents per gallon of diesel (28.5 cents per gallon total). The ACT also added annual fees to a hybrid (\$100) and electric vehicle (\$200) registration. Additionally, the Act transfers casino tax revenues annually that are in excess of \$31,200,000 to the State Highway Fund. Act 416 generates \$95 million annually for state highways and \$26 million annually for county roads and city streets.

In 2020, 55.3% of voters approved Issue 1, a constitutional amendment, that continued the ½-cent sales tax for road improvements that has been in place since 2013 and was set to expire in 2023. The voter approved constitutional amendment made the ½ cent sales tax a permanent revenue source for transportation. The ½-cent tax is split 70 percent directed to the State of Arkansas, 15 percent to cities, and 15 percent to counties. The permanent tax provides an additional estimated \$205M annually to ARDOT and an estimated \$43 million each to cities and counties.

ARDOT included 35 projects on 19 corridors as part of the original 2012 CAP program with approximately \$700 million going to cities and counties for transportation projects. A permanent State-Aid Street Fund was also created by allocating one-cent from the per-gallon motor fuels tax and generates \$20 million annually in additional funds for city-owned street projects.

The MPA’s transportation system has greatly benefited from the 2012 CAP program which included funding for eight projects for a total of \$378 million, and approximately \$86 million in additional turn back funds to the 34 jurisdictions over ten years, and establishment of the State Aid Street Fund. Table 9.1 provides a summary of the annual estimated amounts that each county and city will receive in additional turn back funds with the passage of Issue 1 in November 2020. The 2045 MTP project constrained list includes projects with funding from anticipated Issue 1 /CAP II funding.

	STATE HIGHWAYS	COUNTY ROADS	CITY STREETS
ACT 416	\$95 million	\$13 million	\$13 million
Issue 1	<u>\$205 million</u>	<u>\$44 million</u>	<u>\$44 million</u>
Total	\$300 million	\$57 million	\$57 million

Table 9.1 Annual Estimated Amounts City/County Turnback Summary

ESTIMATED CITY AND COUNTY TURNBACK

Explanation of turnback funds: By law, the revenues derived from sources dedicated to transportation (motor fuel taxes, vehicle registration fees, the natural gas severance tax, the permanent 1/2-cent sales tax, etc.) are divided between the state (ARDOT), all cities, and all counties. The state (ARDOT) receives 70 percent of those funds for work on state highways; 15 percent is divided among all incorporated cities in the state for work on city transportation projects; and 15 percent is divided between all the counties for work on county roads and bridges. The 15 percent that goes to cities and counties is referred to as 'turnback funds.'

Location		Total 2023 Estimated City and County Turnback Includes 2012 Voter Approved 1/2 Cent Turnback Amounts		2020 Voter Approved Issue 1 Annual 1/2 Cent Estimated Turnback Amounts In Year 2024 1/2 Cent Amount Only	
County	City	County Amount	City Amount	County Amount	City Amount
Benton		\$6,093,186		\$1,788,052	
	Avoca		\$38,758		\$11,374
	Bella Vista		\$2,106,738		\$618,224
	Bentonville		\$2,803,663		\$822,738
	Cave Springs		\$302,676		\$88,821
	Centeron		\$755,697		\$221,760
	Decatur		\$134,937		\$39,597
	Garfield		\$39,870		\$11,700
	Gateway		\$32,166		\$9,439
	Gentry		\$272,019		\$79,824
	Gravette		\$247,240		\$72,553
	Highfill		\$46,303		\$13,588
	Little Flock		\$205,305		\$60,247
	Lowell		\$581,922		\$170,766
	Pea Ridge		\$380,747		\$111,731
	Rogers		\$4,444,752		\$1,304,317
	Siloam Springs		\$1,194,422		\$350,504
	Springtown		\$6,910		\$2,028
	Sulphur Springs		\$40,584		\$11,910
TOTAL CITY			\$13,634,709		\$4,001,121
Washington		\$ 5,649,049		\$ 1,657,719	
	Elkins		\$210,308		\$61,715
	Elm Springs		\$150,345		\$44,119
	Farmington		\$474,465		\$139,232
	Fayetteville		\$5,843,843		\$1,714,882
	Goshen		\$85,061		\$24,961
	Greenland		\$102,772		\$30,158
	Johnson		\$266,380		\$78,170
	Lincoln		\$178,619		\$52,416
	Prairie Grove		\$351,520		\$103,154
	Springdale		\$5,807,230		\$1,704,138
	Tontitown		\$195,377		\$57,334
	West Fork		\$184,020		\$54,001
	Winslow		\$31,054		\$9,113
TOTAL CITY			\$13,880,994		\$4,073,393

Table 9.1 Annual Estimated Amounts City/County Turnback Summary

CONSTRAINED PROJECT LIST

Significant work went into past long range transportation plans to identify and program future projects and many of these projects are still regional priorities. In developing the 2045 MTP Constrained List, identified projects have been adjusted for inflation and projects that are already completed have been removed. The FFY 2021-2024 TIP provides the listing of the first four years of projects and is considered to be part of the 2045 Metropolitan Transportation Plan constrained project listing.

The project listing provides a planning estimate of how much Federal and State/local match may be available, what roadway improvements were identified, and the time period in which the project may be completed. Projects in past transportation plans have been carried forward as identified regional needs. The Constrained List was developed as follows:

- List projects with existing ARDOT Job Numbers and agreements with jurisdictions.
- List projects based on corridors with completed and on-going studies.
- List projects that complete the 2045 Network – Start with segments that complete the four-lane to four-lane system in the urban areas and phase additional projects in rural areas that are forecasted to become urbanized.
- List projects in areas that are forecasted to have significant growth in traffic, employment, and population.

The TAC was involved in evaluating the projects as the Constrained List was developed. The 2045 Travel Demand Model was used as an analysis tool to check the reasonableness of the draft Constrained List. The proposed projects were entered into a model run and then two queries were made:

1. Show all roads in 2045 that still have two lanes but have over 18,000 ADT.
2. Show all roads in 2045 that are four lanes and have over 36,000 ADT.

The model did show some significant sections of arterial roads that were still two lanes in 2045 with a forecast ADT of over 18,000. These roads were added to the Unconstrained List of needed road improvements.

The model analysis also showed several arterials that are currently four lanes with traffic counts above 36,000 vehicles per day approaching 50,000 to 60,000 vehicles per day in 2045. These routes are located in the urbanized area and in traffic analysis zones that are forecasted to see significant growth in employment and households.

FORECASTED FHWA REVENUE ANALYSIS – DEMONSTRATION OF FISCAL CONSTRAINT

The forecasted available FHWA federal funding plus required match for projects in Benton and Washington was calculated at \$41.16M annually in year 2025 and inflated by 2% per year to \$61.17M in year 2045. The overall total of available federal funding plus match for the 20-year period from 2025 to 2045 was calculated at \$1,061B (estimate does not include the current adopted 2021-2024 TIP/STIP funding). NHPP System Preservation Funding, ACT 416 system preservation funding, and STGPA >200K Funding are not included in the annual estimate of available funding for capital projects.

The constrained project list does include additional State funding from the 2020 voter approved Issue 1 permanent ½ cent sales tax. Projects selected/listed in the “constrained” table were listed based on the ARDOT listed potential Issue 1 projects as published on the ARDOT website. NWARPC is showing project estimates based on year of expenditure.

The following constrained project listing table demonstrates fiscal constraint for the 25-year planning horizon by demonstrating listed projects/costs not exceeding the annually available funding by year.

DEMONSTRATION OF TAKING CARE OF THE SYSTEM – SYSTEM PRESERVATION FUNDING

The National Highway Performance Program (NHPP) Pavement Preservation Funds provides \$15M to \$23M per year to maintain the system. Act 416 System Preservation Funds along with Issue 1 Funds provide an additional \$14.4M to the City/County per year and \$30-40M (est.) per year for ARDOT in Benton and Washington County to maintain the system.

The State Legislature Enacted Act 416 to provide additional funding dedicated to system preservation. The Act levied a wholesale sales tax on motor fuel and distillate special fuel that results in a 3 cents per gallon increase (24.5 cents per gallon total) and 6 cents per gallon of diesel (28.5 cents per gallon total). The Act also added annual fees to a hybrid (\$100) and electric vehicle (\$200) registration. Additionally, the Act transfers casino tax revenues annually that are in excess of \$31,200,000 to the State Highway Fund.

In 2020, 55.3% of voters approved Issue 1, a constitutional amendment, that continued the ½-cent sales tax for road improvements that has been in place since 2013 and was set to expire in 2023. The voter approved constitutional amendment made the ½ cent sales tax a permanent dedicated revenue source for transportation. The ½-cent tax is split 70 percent directed to the State of Arkansas, 15 percent to cities, and 15 percent to counties.

CONSTRAINED PROJECT LIST ARKANSAS

State Highway	County	Project	From	Dir.	To	Miles	est. Cost	Year of Expenditure	Funding Source
Hwy 12	Benton	Widen 4-lane Divided	Shell Rd.	South	Regional Dr.	5	\$ 38,000,000	2025	Fed_State
Hwy 12	Benton	Widen 4-lane divided (pre Eng, ROW, Const Eng)	2nd St.	East	City Limits (Roge	1.89	\$ 2,600,000	2025	Fed_State
US 412 Bypass (612)	Benton/Wash.	New Freeway (4 Lanes)	Hwy 112	West	US 412 (Tontitow	6.2	\$ 128,700,000	2025	CAP II
XNA Airport Access Road	Benton	New Freeway	Hwy 112	North	XNA	4	\$ 86,000,000	2025	CAP II
I-49	Washington	Widen to 6 lanes	Hwy 265	North	US62	1.4	\$ 9,500,000	2026	Fed_State
Hwy 112	Washington	Widen 4-lane Divided	Howard Nickell	North	Don Tyson Parkw	2.7	\$ 21,000,000	2026	CAP II
Hwy 72	Benton	Widen 4-lane Divided	I-49	East	Little Sugar Cree	1.87	\$ 14,000,000	2026	Fed_State
Hwy 72	Benton	Widen 4-lane Divided (pre Eng, ROW, Const Eng)	Little Sugar Creek	East	Curtis Ave	6.24	\$ 16,000,000	2026	Fed_State
Hwy 72	Benton	Widen 4-lane Divided (Const Only)	Little Sugar Creek	East	Curtis Ave	6.24	\$ 48,500,000	2027	Fed_State
Hwy 112*	Benton	Widen 4-lane Divided	US 612	North	Pleasant Grove Road		\$ 37,000,000	2027	CAP II
Hwy 265	Benton	Widen 4-lane Divided (3 to 4)	1st Street/Pleasant	North	Hwy 94/New Ho	2	\$ 21,000,000	2028	Fed_State
Hwy 12	Benton	Widen 4-lane Divided (Const Only)	2nd St.	East	City Limits (Roge	1.89	\$ 8,000,000	2028	Fed_State
US 71	Benton	Various Imps. per Study Rec.	US 71B	North	AR-MO State Line		\$ 5,000,000	2028	Fed_State
Hwy 264	Benton	Widen 4-lane Divided	Goad Springs Rd.	West	Bellview Rd.	0.91	\$ 9,000,000	2028	Fed_State
Hwy 102-62 Centerton	Benton	Widen 4-lane Divided (3 to 4)	Hwy 102B	East	2nd Street	9.47	\$ 20,000,000	2029	Fed_State
Hwy 102B	Benton	Widen 4-lane Divided	Hwy 102	North	Hwy 72	1.76	\$ 17,500,000	2029	Fed_State
Hwy 102	Benton	Widen 4-lane Divided	Hwy. 279 N	East	Hwy 279 S	1.26	\$ 9,000,000	2030	Fed_State
Hwy 94	Benton	Widen 4-lane Divided	U.S. 71	East	1st Street	0.66	\$ 2,800,000	2030	Fed_State
US 412 Bypass (612)	Benton	New Freeway (4 Lanes)	I-49	East	Hwy 265		\$ 127,300,000	2030	CAP II
Hwy 45	Washington	Widen to 3 Lanes	Lisa Lane	East	Starr Rd.	1.07	\$ 15,000,000	2030	Fed_State
Hwy 45	Washington	Widen to 3 Lanes	Starr Rd.	East	Oakland Zion Rd	0.76	\$ 11,000,000	2030	Fed_State
Hwy 265	Benton	Widen 4-lane Divided (3 to 4) Ph. 2	Hwy 264	North	1st Street/Pleas	4	\$ 41,000,000	2031	Fed_State
Hwy 45	Washington	Safety and Capacity Improvements	Oakland Zion Rd.	East	White River	5.37	\$ 32,400,000	2032	Fed_State
US 412	Benton	Widen to 6 lanes	Siloam Springs City Limits	West	Existing 6 lanes	3.1	\$ 18,700,000	2033	Fed_State
Hwy 279	Benton	Widen 4-lane Divided	Hwy. 102	South	Hwy 12	2.96	\$ 30,000,000	2033	Fed_State
Hwy 264	Benton	Widen to 3 Lanes	Bellview Rd.	West	Hwy 112	3.25	\$ 24,000,000	2034	Fed_State
Hwy 265	Washington	Widen to 5 Lanes (4 to 5)	Hwy 412	North	Mountain St.	1.25	\$ 10,000,000	2034	Fed_State
Hwy 43	Benton	Widen 4-lane Divided	Cheri Whitlock Parkway	West	Dawn Hill Rd.	0.21	\$ 1,500,000	2035	Fed_State
Hwy 43	Benton	Widen 4-lane Divided	Dawn Hill Rd	West	Sycamore Heigh	0.92	\$ 9,000,000	2035	Fed_State
Hwy 16	Washington	Widen 4-lane Divided	E. Roberts Road	East	Middle Fork -Wh	3	\$ 27,000,000	2035	Fed_State
Hwy 72	Benton	Widen 4-lane Divided	US 71B	West	Hwy 102B	3.7	\$ 43,100,000	2036	Fed_State
Hwy 279	Benton	Widen 4-lane Divided	Hwy. 102	North	Hwy 549 (Future	5.39	\$ 48,000,000	2037	Fed_State
Hwy 72	Benton	Widen 4-lane Divided	Hwy 59	East	Hwy 549	5.27	\$ 52,000,000	2038	Fed_State
US 62	Benton	Widen 4-lane Divided	S. Wimpy Jones	East	Hwy 37	4.5	\$ 26,100,000	2039	Fed_State
Hwy 16	Washington	Widen to 4 Lanes	Middle Fork -Wh	East	Hwy 74	3.04	\$ 21,000,000	2039	Fed_State
US 412 Bypass (612)	Benton	New Freeway (4 Lanes)	I-49	East	412 East (Sonora	6.7	\$ 252,200,000	2040	CAP II
I-49	Benton	Widen to 6 lanes	Hwy 72	North	US 71 North Wal	3.62	\$ 24,000,000	2041	Fed_State
AR 59	Benton	Widen 2-5 Lanes	3rd St/Gentry	North	Y City Rd	3.33	\$ 46,800,000	2042	Fed_State
AR 59	Benton	Widen 2-5 Lanes	Y City Rd	North	Hwy 102/Decatu	2.4	\$ 27,000,000	2043	Fed_State
AR 59	Benton	Widen 2-5 Lanes	102/Decatur	North	Bethlehem Rd	2.11	\$ 23,700,000	2043	Fed_State
AR 59	Benton	Widen 2-5 Lanes	Hodge Rd/Eldred	North	AR 72	3.05	\$ 35,000,000	2044	Fed_State
AR 59	Benton	Widen 3-5 Lanes	Bethlehem Rd	North	Hodge Rd/Eldred	1.21	\$ 13,400,000	2044	Fed_State
AR 72	Benton	Widen 4 Lanes Divided	71B	West	102B	3.73	\$ 39,000,000	2045	Fed_State
							Total	\$ 1,491,800,000	

CONSTRAINED PROJECT LIST – VARIOUS PROJECTS – NHPP PAVEMENT PRESERVATION, SAFETY, BRIDGE AND STBGP FUNDING

Various Projects	2021-2030	2031-2035	2036-2045
Various Intersection, Bridge, and Safety Projects	\$ 15,000,000	\$ 20,000,000	\$ 25,000,000
Various Resurfacing, Restoration, Rehab, and Reconstruction Projects	\$ 15,000,000	\$ 20,000,000	\$ 25,000,000

Note: Routes with existing ARDOT Studies that have multiple corridor options have been estimated with one option for listing and for fiscal constraint. The actual route has not been determined by ARDOT. Federal funds inflated 2 percent per year and project costs by 2 percent per year with cost estimate averaged in periods between 2030 to 2045.

CONSTRAINED PROJECT LIST – TRANSIT PROJECTS

The NWARPC is the designated recipient of FTA urban funds. The NWARPC prepares an annual Program of Projects (POP) to allocate the FTA federal funding. The current allocation of FTA 5307 funding is based on a split of 55% to Ozark Transit Authority and 45% to Razorback Transit as approved by the NWARPC Policy Committee. The current allocation of FTA 5339 funding is split equally between transit providers as approved by the NWARPC Policy Committee.

ARDOT currently administers the FTA 5310 program for NWARPC. Ozark Regional Transit is a direct recipient of FTA 5311 rural funding. Transit projects for both Ozark Transit Authority and Razorback Transit for 2021 to 2024 are programmed in the approved FFY 2021 to 2024 TIP.

2045 MTP Transit Projects 2025 to 2045 (2021 to 2024 projects shown in TIP) Available FTA Federal Funding + Required Local Match + Local Overmatch Inflated at 2% per year Note: The region currently spends approximately \$8M per year on transit	2025 to 2030	2031 to 2045	Total
FTA Section 5339 Capital -ORT and Razorback Transit -Fayetteville-Springdale-Rogers Urbanized Area	\$ 2,600,000	\$ 8,000,000	\$ 10,600,000
FTA Section 5307 Capital and Operations - ORT and Razorback Transit - Fayetteville-Springdale-Rogers Urbanized Area	\$47,800,000	\$ 147,500,000	\$195,300,000
FTA Section 5310 Enhanced Mobility of Seniors & Individuals with Disabilities - Fayetteville-Springdale-Rogers Urbanized Area	\$ 1,500,000	\$ 4,800,000	\$ 6,300,000
FTA Section 5311 Formula Grants for Rural Areas - Demand Response Transit - Benton County and Washington County	\$ 875,000	\$ 2,672,000	\$ 3,547,000
Total	\$ 52,775,000	\$ 162,972,000	\$ 215,747,000

CONSTRAINED PROJECT LIST – MoDOT

The constrained project list was developed in cooperation with MoDOT Southwest District. Two specific projects are listed in the Missouri portion of the MPA and the remaining projects are based on the Asset Management Plan Summary specific to the MPA. Demonstration of fiscal constraint is shown below:

Maintenance and Operations	
FY20 Cost/Lane Mile	\$ 5,137
FY22 Cost/Lane Mile	\$ 5,345
NARTS Lane Miles	95.043
FY22 M&O Cost per year	\$ 507,961

System Improvement/Specific Projects (Constrained Projects)		
Year	Description	Total
2023	US 71 Intersection Improvements from I-49 to Arkansas ²	\$ 300,000
2024	MO 90 Bridge over Little Sugar Creek	\$ 2,948,000

²Funding availability depends on outcome of STIP programming process.

Asset Management Summary - Inflated by 2% per Year (Constrained Projects)								Revenue Sources					
Year	Interstates	Majors	Minors	Bridges	ADA	ITS/Mobility ¹	Total	Maint & Operations	NHPP	STBG	State	Check Total	M&O State
2022	\$ -	\$ -	\$ 775,000	\$ -	\$ -	\$ 210,000	\$ 985,000	\$ 507,961	\$ -	\$ 788,000	\$ 197,000	\$ 985,000	\$ 507,961
2023	\$ -	\$ 3,430,199	\$ 95,717	\$ -	\$ 204,000	\$ 214,200	\$ 3,944,116	\$ 518,120	\$ 2,744,159	\$ 411,133	\$ 788,823	\$ 3,944,116	\$ 518,120
2024	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 218,484	\$ 218,484	\$ 528,482	\$ -	\$ 174,787	\$ 43,697	\$ 218,484	\$ 528,482
2025	\$ 2,564,282	\$ -	\$ -	\$ 569,736	\$ -	\$ 222,854	\$ 3,356,872	\$ 539,052	\$ 2,507,214	\$ 178,283	\$ 671,374	\$ 3,356,872	\$ 539,052
2026	\$ -	\$ -	\$ -	\$ 751,424	\$ -	\$ 227,311	\$ 978,735	\$ 549,833	\$ 601,140	\$ 181,849	\$ 195,747	\$ 978,735	\$ 549,833
2027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 231,857	\$ 231,857	\$ 560,830	\$ -	\$ 185,486	\$ 46,371	\$ 231,857	\$ 560,830
2028	\$ -	\$ -	\$ -	\$ 1,638,574	\$ -	\$ 236,494	\$ 1,875,068	\$ 572,046	\$ 1,310,859	\$ 189,195	\$ 375,014	\$ 1,875,068	\$ 572,046
2029	\$ 2,478,060	\$ 4,313,315	\$ -	\$ 394,274	\$ -	\$ 241,224	\$ 7,426,872	\$ 583,487	\$ 5,748,518	\$ 192,979	\$ 1,485,374	\$ 7,426,872	\$ 583,487
2030	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 246,048	\$ 246,048	\$ 595,157	\$ -	\$ 196,839	\$ 49,210	\$ 246,048	\$ 595,157
2031	\$ -	\$ -	\$ -	\$ 851,403	\$ -	\$ 250,969	\$ 1,102,373	\$ 607,060	\$ 681,122	\$ 200,776	\$ 220,475	\$ 1,102,373	\$ 607,060
Total	\$ 5,042,341	\$ 7,743,513	\$ 870,717	\$ 4,205,411	\$ 204,000	\$ 2,299,441	\$ 20,365,424	\$ 5,562,027	\$ 13,593,013	\$ 2,699,327	\$ 4,073,085	\$ 20,365,424	\$ 5,562,027
AVG	\$ 546,597	\$ 850,660	\$ 103,834	\$ 447,172	\$ 23,902	\$ 250,969	\$ 2,036,542	\$ 556,202.71	\$ 27,186,025	\$ 5,398,653	\$ 8,146,170	\$ 40,730,848	\$ 556,203

¹ Estimate is for entire Southwest Rural District

Future Asset Management - Inflated by 2% per Year (Constrained Projects)								Revenue Sources					M&O
Year	Interstates	Majors	Minors	Bridges	ADA ²	ITS/Mobility ¹	Total	M&O	NHPP	STBG	State	Check Total	State
2032	\$ 557,529	\$ 867,673	\$ 105,911	\$ 456,116	\$ 5,100	\$ 255,989	\$ 2,248,317	\$ 619,201	\$ 1,505,054	\$ 293,600	\$ 449,663	\$ 2,248,317	\$ 619,201
2033	\$ 568,680	\$ 885,026	\$ 108,029	\$ 465,238	\$ 5,306	\$ 261,109	\$ 2,293,388	\$ 631,585	\$ 1,535,155	\$ 299,555	\$ 458,678	\$ 2,293,388	\$ 631,585
2034	\$ 580,053	\$ 902,727	\$ 110,190	\$ 474,543	\$ 5,412	\$ 266,331	\$ 2,339,256	\$ 644,217	\$ 1,565,858	\$ 305,546	\$ 467,851	\$ 2,339,256	\$ 644,217
2035	\$ 591,654	\$ 920,781	\$ 112,394	\$ 484,034	\$ 5,520	\$ 271,657	\$ 2,386,041	\$ 657,101	\$ 1,597,175	\$ 311,657	\$ 477,208	\$ 2,386,041	\$ 657,101
2036	\$ 603,487	\$ 939,197	\$ 114,642	\$ 493,714	\$ 5,631	\$ 277,091	\$ 2,433,762	\$ 670,243	\$ 1,629,119	\$ 317,890	\$ 486,752	\$ 2,433,762	\$ 670,243
2037	\$ 615,557	\$ 957,981	\$ 116,934	\$ 503,588	\$ 5,743	\$ 282,632	\$ 2,482,437	\$ 683,648	\$ 1,661,701	\$ 324,248	\$ 496,487	\$ 2,482,437	\$ 683,648
2038	\$ 627,868	\$ 977,141	\$ 119,273	\$ 513,660	\$ 5,858	\$ 288,285	\$ 2,532,086	\$ 697,321	\$ 1,694,935	\$ 330,733	\$ 506,417	\$ 2,532,086	\$ 697,321
2039	\$ 640,426	\$ 996,683	\$ 121,659	\$ 523,933	\$ 5,975	\$ 294,051	\$ 2,582,727	\$ 711,268	\$ 1,728,834	\$ 337,348	\$ 516,545	\$ 2,582,727	\$ 711,268
2040	\$ 653,234	\$ 1,016,617	\$ 124,092	\$ 534,412	\$ 6,095	\$ 299,932	\$ 2,634,382	\$ 725,493	\$ 1,763,411	\$ 344,095	\$ 526,876	\$ 2,634,382	\$ 725,493
2041	\$ 666,299	\$ 1,036,949	\$ 126,574	\$ 545,100	\$ 6,217	\$ 305,930	\$ 2,687,069	\$ 740,003	\$ 1,798,679	\$ 350,977	\$ 537,414	\$ 2,687,069	\$ 740,003
2042	\$ 679,625	\$ 1,057,688	\$ 129,105	\$ 556,002	\$ 6,341	\$ 312,049	\$ 2,740,811	\$ 754,803	\$ 1,834,652	\$ 357,996	\$ 548,162	\$ 2,740,811	\$ 754,803
2043	\$ 693,217	\$ 1,078,842	\$ 131,687	\$ 567,122	\$ 6,468	\$ 318,290	\$ 2,795,627	\$ 769,899	\$ 1,871,346	\$ 365,156	\$ 559,125	\$ 2,795,627	\$ 769,899
2044	\$ 707,082	\$ 1,100,419	\$ 134,321	\$ 578,465	\$ 6,597	\$ 324,656	\$ 2,851,540	\$ 785,297	\$ 1,908,772	\$ 372,459	\$ 570,308	\$ 2,851,540	\$ 785,297
2045	\$ 721,223	\$ 1,122,427	\$ 137,007	\$ 590,034	\$ 6,729	\$ 331,149	\$ 2,908,570	\$ 801,003	\$ 1,946,948	\$ 379,908	\$ 581,714	\$ 2,908,570	\$ 801,003
Future	\$ 8,905,934	\$ 13,860,153	\$ 1,691,818	\$ 7,285,962	\$ 82,994	\$ 4,089,150	\$ 35,916,012	\$ 9,891,081	\$ 49,979,237	\$ 99,875,480	\$ 195,661,809	\$ 355,407,607	\$ 700,924,133

¹ Estimate is for entire Southwest Rural District

² Assumes completion of ADA Transition Plan by FY27 statewide, then intermittent maintenance of pedestrian facilities.

UNCONSTRAINED PROJECT LIST

State Highway	County	Project	From	Dir.	To	Miles	Unconstrained	Unconstrained
Hwy 62	Washington	Widen to 5 Lanes	City - Prairie Grove East	West	City - Lincoln	9.73	\$ 95,000,000	Unconstrained
Hwy 12	Benton	Widen to 5 Lanes	Regional Dr.	Southwest	Hwy 264	4.84	\$ 50,000,000	Unconstrained
Hwy 16	Washington	Safety and Capacity Improvements	Double Springs Rd.	West	Weddington Woods	2.87	\$ 30,000,000	Unconstrained
I-49	Benton and Washington	Widen to 8 Lanes	US 62/MLK	North	Hwy 72	25.83	\$ 176,000,000	Unconstrained

US 612 Potential New Interchanges (Unconstrained)
Javello Rd Interchange/US612
Gene George Blvd./Wagon wheel Rd Interchange/US 612
E. Monitor Rd Interchange/US 612
Parsons Road Interchange /US612
I-49 Potential New Interchanges (Unconstrained)
Garrett Rd Interchange/I-49
J Street Interchange - Tiger Blvd. to Interstate 49
Punkin Hollow Road
Hwy 279/Hwy 549/I-49

NHPP FUNDING AND OTHER FUNDING PROGRAMS

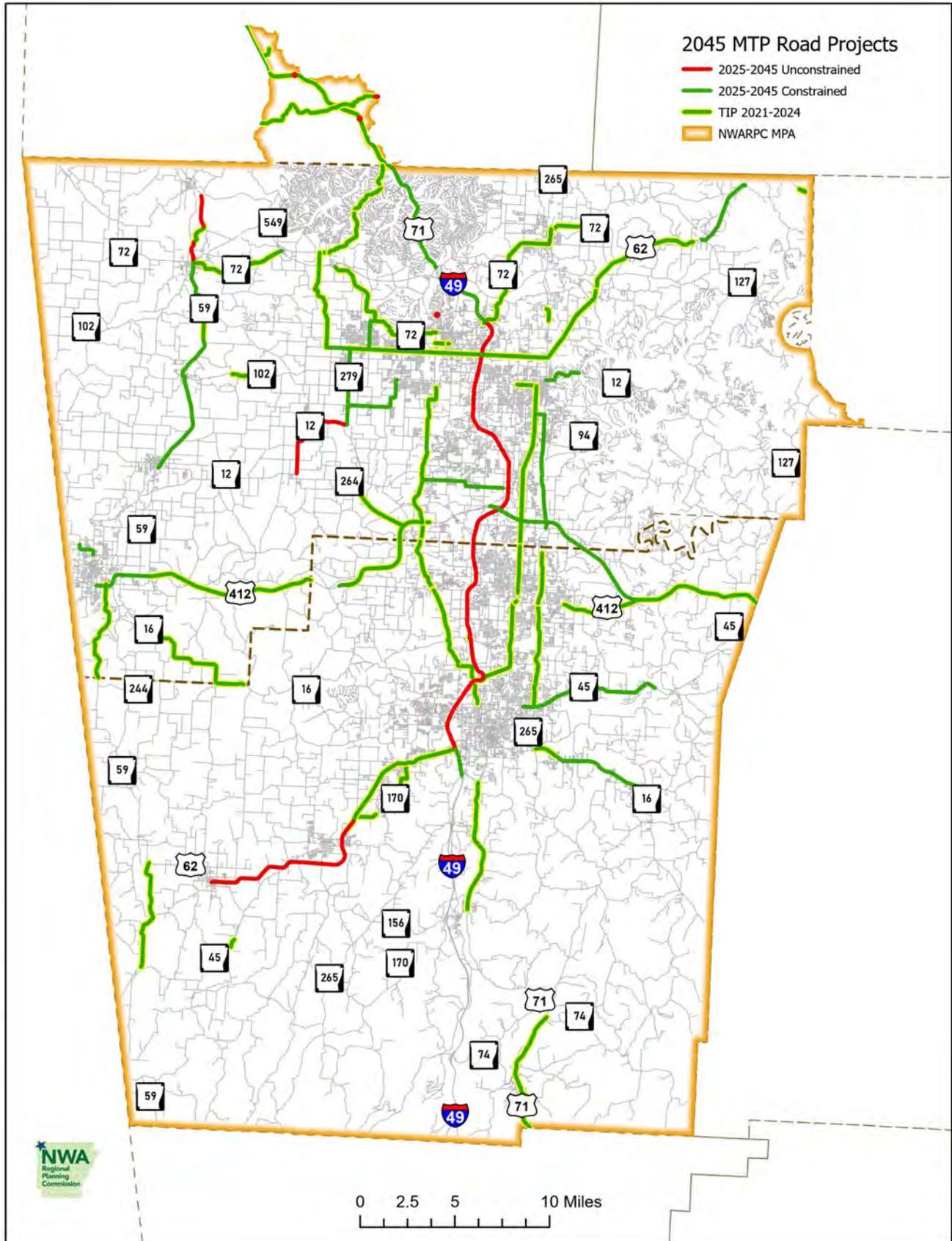
NATIONAL HIGHWAY PERFORMANCE PROGRAM, HIGHWAY SAFETY IMPROVEMENT PROGRAM, SURFACE TRANSPORTATION PROGRAM, EASTERN FEDERAL LANDS, AND AR ACT 416

The MTP recognizes that additional “Statewide Generic Projects” will be programmed in the STIP and TIP that will address the following projects:

- IRP Debt Service
- Various Resurfacing/ Restoration / Rehab / Reconstruction
- Various Bridge Rehab / Replacement
- Bridge Guard Rail / Scour Control / Inspection / Inspection Equipment
- Railroad Xing Protect Devices / Surfacing / Hazard Elimination
- Various Transportation Alternative Projects
- Various Trail Projects
- Various Resurfacing / Restore / Rehab / Recon / Bridge Replacement / Bridge Rehabilitation on County Roads
- Various Bridge Rehab / Replacement on County Roads
- PE / Right-of-Way / Utilities / CENG
- Bridge Painting
- Motor Fuel Enforcement Activities
- Various Statewide Safety Improvements
- Various Pavement Marking & Signing Projects
- Workforce Training and Development
- Various Signal and Intersection Improvements
- Eastern Federal Lands Projects

These “Statewide Generic Projects” are considered to be listed in the MTP and may be eligible for future federal-aid funding.

Map 9.2 - 2045 MTP Project Locations (Includes FFY 2021 to 2024 TIP Projects)



STBGP-GT 200K FUNDING

In 2012, the FTA and the FHWA designated the Fayetteville-Springdale-Rogers, AR-MO urbanized area as a Transportation Management Area (TMA). This TMA designation provides Surface Transportation Program – Attributable (STBGP-GT 200K) funds to the NWARPC based on the 2010 Census Urbanized Area population of 295,083.

The NWARPC selects projects through a competitive process for STBGP-GT 200K funding. The current policy has a focus on selecting projects of regional significance which is defined as an improvement to major routes such as north/south corridors and the east/west corridors and frontage roads that improve access, reduce crash rates, and/ or relieve congestion to the north/south routes.

Projects are selected on an annual basis and funding is programmed in the NWARPC 2021 to 2024 TIP and in subsequent future TIPs.

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

The NWARPC selects projects through a competitive process for TAP funding. TAP funds are awarded for the construction phase of a selected project. Preliminary Engineering and Final Design, Environmental, Right-of-way, and Utility Relocation is the responsibility of the applicant and must meet Federal-aid requirements.

The NWARPC has focused on implementing the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan projects. Project funding is programmed as part of the NWARPC FFY 2021-2024 TIP and subsequent future TIPs.

BUILD GRANT AWARD – COMPLETION OF I-49 MISSOURI-ARKANSAS CONNECTOR

FHWA issued a Record of Decision approving the location of the Bella Vista Bypass on April 19, 2000. Over two decades later, the Missouri-Arkansas Connector is now under construction as a four-lane, divided, interstate west of existing US 71 from Bella Vista, Arkansas to Pineville, Missouri with anticipated completion by the end of 2021.

In 2012, voters approved the Connecting Arkansas Program (CAP) and included funding for the construction of the initial two of the four lanes of the bypass from Bentonville to the Missouri Stateline along with the new Interchange at US 71.

In 2018, NWARPC applied for \$25M Grant to complete the I-49 Missouri-Arkansas Connector in McDonald County Missouri. The project completes the bi-state 18.9-mile I-49 interstate from Bentonville, AR to Pineville, MO.

This BUILD Grant project leveraged approximately \$102M in Arkansas voter-approved state funding along with existing MoDOT funding to complete I-49 in both states. The overall project completes the last connectivity gap in the 270-mile north-south I-49 corridor between Fort Smith, AR and Kansas City, MO connecting three east-west interstates I-40, I-44, and I-70.



I-49
MISSOURI-ARKANSAS
CONNECTOR

APPLICANT
Northwest Arkansas
Regional Planning
Commission

PROJECT PARTIES
Arkansas Department
of Transportation
(AR DOT)
Missouri Department of
Transportation
(MoDOT)



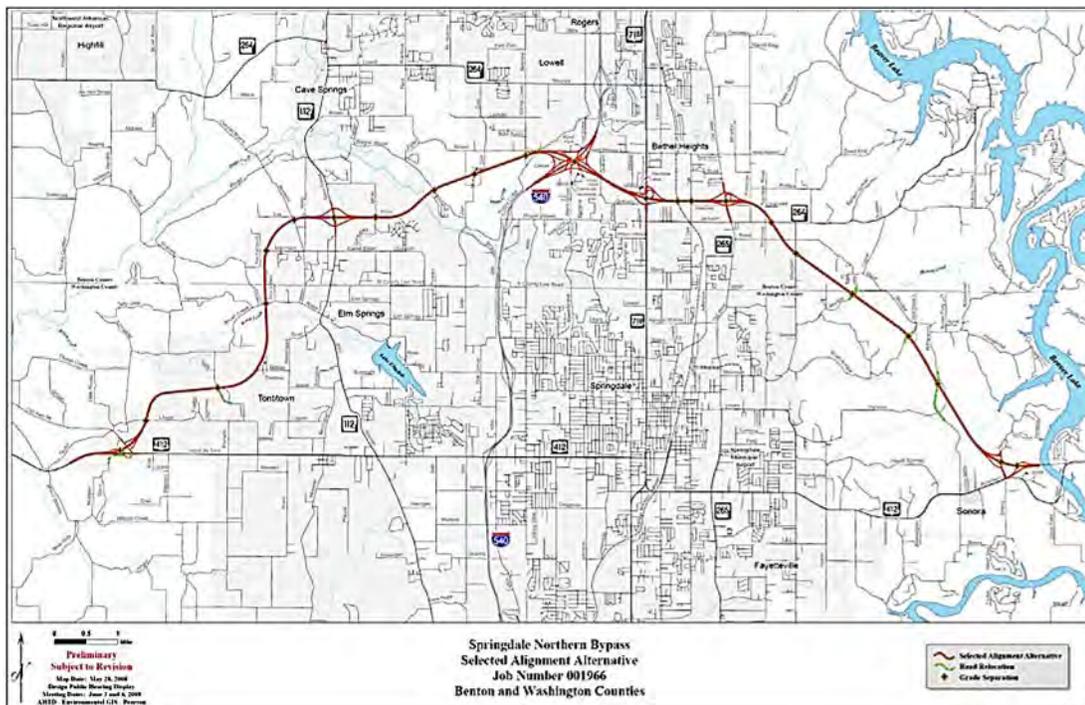
MAJOR CORRIDOR SUMMARIES

HWY. 412 NORTHERN BYPASS

FHWA issued a Record of Decision on February 15, 2006 that approved a Selected Alignment Alternative for the proposed bypass. This project is considered an essential improvement to the highway system in the MPA. While not fully funded in the Constrained List, the project is still considered one of the top priorities in the area - [for more information visit this link.](#)

In 2012, the CAP program was approved by Arkansas voters and included funding for the segment between I-49 and Hwy. 112 including one-half of the interchange within I-49. The contract was awarded in December 2014 and a groundbreaking was held in April 2015 on the \$100 million, 4.57-mile segment. The first phase was completed in April 2018.

The Constrained List includes completing the entire project from Hwy. 412 (west) to Hwy. 112, Hwy. 412 from I-49 to Hwy. 412 (east), approximately 10 miles. Every funding option will need to be explored to complete this project over the next 25 years.



I-49 IMPROVEMENTS

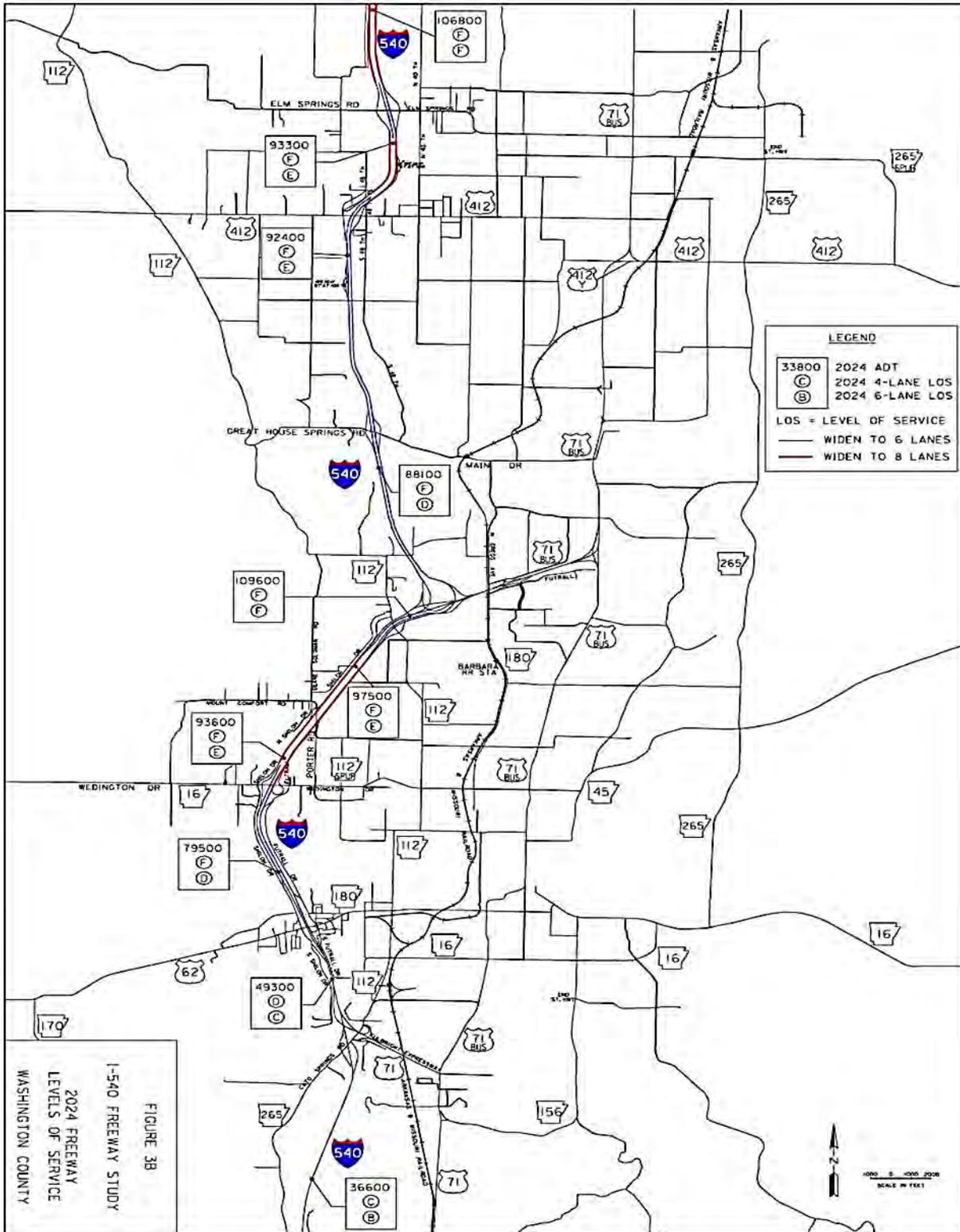
In summer 2002, NWARPC requested that ARDOT undertake a study of future capacity needs for the I-49 corridor through Washington and Benton Counties. In September 2003, Parsons Transportation Group was selected to perform the Interstate I-540 (I-49) Improvement Study and it was completed in April 2006. The recommendations in the Study provided the basis for allocating estimated funding resources in past plans and helped guide the 2012 CAP planned. The Study recommended widening the Interstate from Fayetteville to Bentonville and recommended short term, mid-term and long-term improvements for interchanges and number of travel lanes. The study recommendations are provided in much greater detail in the full Interstate [I-540 Improvement Study.](#)



I-49 View from Watkins St. Bridge in Springdale



I-49 View from Walton Blvd/Walnut Street Bridge in Bentonville/Rogers



Source: Interstate I-540 (I-49) Improvement Study (2006)

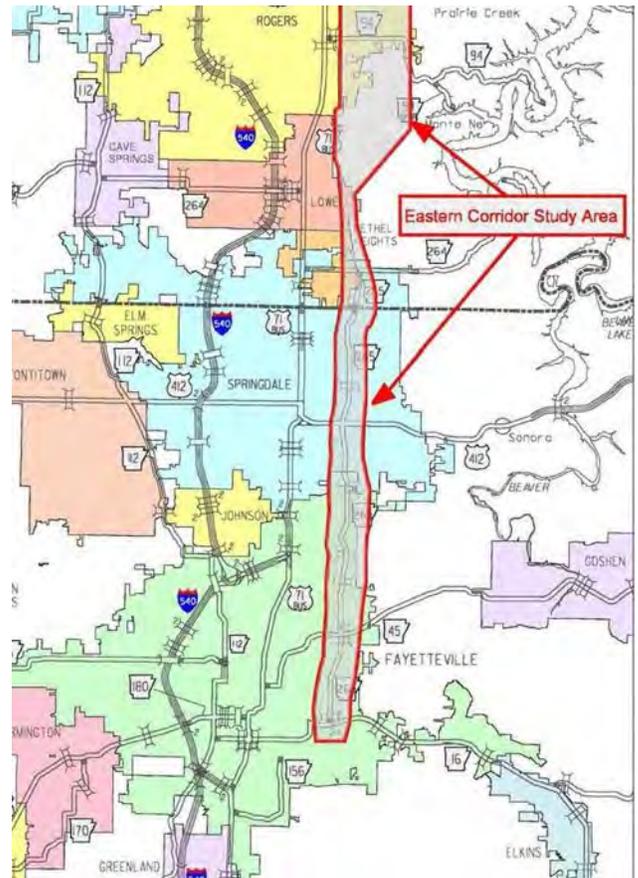
HWY. 265 (Hwy 16 to Hwy 94)

At the request of NWARPC, the Arkansas State Highway Commission passed Minute Order 2009- 093, which authorized ARDOT to conduct a [study](#) of an eastern corridor.

The Study area encompasses multiple local jurisdictions including Fayetteville, Springdale, Bethel Heights, Lowell, Rogers, Bentonville, Washington County, and Benton County. The purpose of the Study was to determine the need for improvements to an eastern North-South corridor from Hwy. 16 in Fayetteville to Hwy. 62 in Rogers.

Today, Hwy. 265 now ends at Hwy 94 in Rogers with no additional plans to extend the Hwy 265 corridor past Hwy 94 in Rogers. Projects completed in Fayetteville and Springdale to widen the highway to four lanes extend from Hwy. 16 East north to Hwy. 264. Hwy. 264 to Pleasant Grove Road, in Rogers, has also been widened to three lanes.

The MTP has listed additional projects over the next 25 years to improve the entire corridor as a four-lane arterial from Springdale to Rogers based on the Study recommendations.



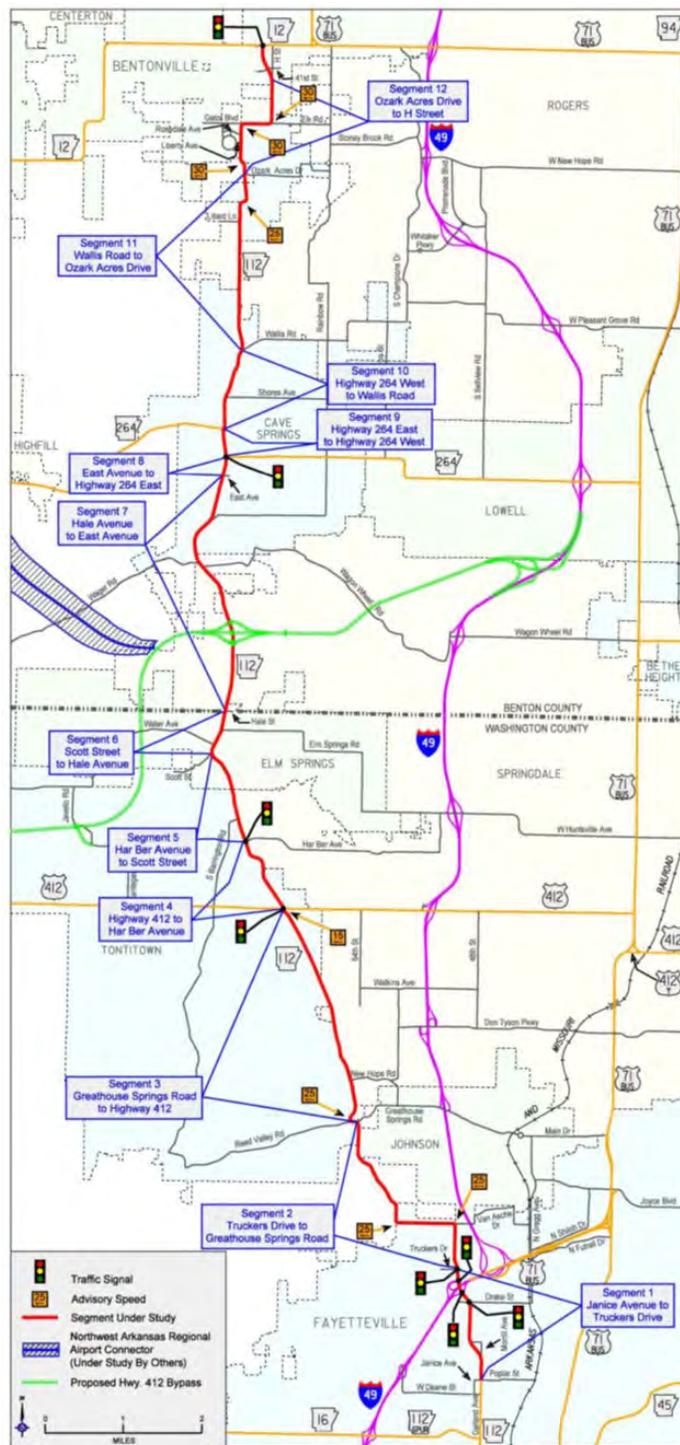
HWY. 112

Hwy. 112 is a two-lane highway that parallels I-49 to the west. It traverses through or near several environmentally sensitive areas, including the Cave Springs Recharge Area. The posted speed limit ranges from 30 to 55 miles per hour, with several areas of reduced advisory speeds located throughout the corridor. It is the only continuous North-South route west of I-49, serving local and regional traffic between Fayetteville and Bentonville, making it crucial for regional mobility.

At the request of NWARPC, the Arkansas State Highway Commission passed Minute Order 2012-027, which authorized a study of Hwy. 112 from Fayetteville to Bentonville, a total length of approximately 20 miles. The purpose of the Study was to determine the feasibility of improvements to Hwy. 112 to address capacity and safety needs.

With the exception of the northern-most portion of Hwy. 112, the corridor has two 10-foot lanes and no shoulders. Due to the continuing development in the area, much of the route is transitioning from a rural to an urban setting. The southern portion of the Study area has the highest traffic volumes with approximately 14,000 vehicles per day (vpd) south of Drake Street and 20,100 vpd at the I-49 interchange in Fayetteville. Hwy. 112 south of Drake Street is also a Razorback Transit bus route.

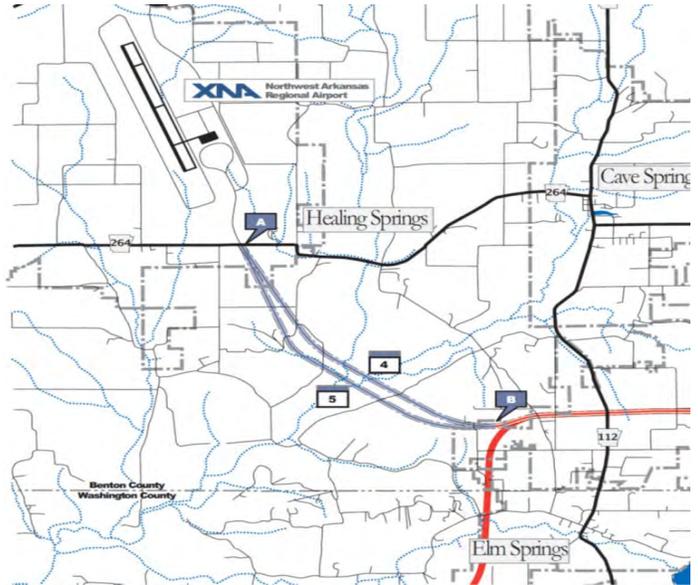
The Improvement Alternative considered as part of the Study would widen Hwy. 112 to four travel lanes, improve geometry, and provide access management. Strategies to manage access such as adequate driveway spacing, a raised median, and deceleration lanes will be necessary to maximize operations and safety through this corridor. Hwy. 112 currently has four travel lanes with a raised median in the northernmost portion of the Study area (from 41st Street to Hwy. 12 in Bentonville). The portion south of the Study area from Hwy. 112 Spur to Deane Street (in Fayetteville) that was recently improved also has four travel lanes with a raised median. This alternative would also realign selected locations of Hwy. 112 to improve safety and mobility.



<https://www.nwarpc.org/pdf/Publications/Hwy%20112%20Corridor%20Study.pdf>

NORTHWEST ARKANSAS NATIONAL AIRPORT ACCESS ROAD

The proposed airport access road will provide an intermodal access road that will connect XNA to Hwy. 612 (Hwy. 412 Northern Bypass) and I-49. The roadway is designed to provide a high speed fully-controlled access roadway for airline passengers, employees, and air freight cargo with access from the Interstate and major highway system. The need for improved access was identified as part of the site selection study in the early 1990’s. A project overview can be found at this [link](#).

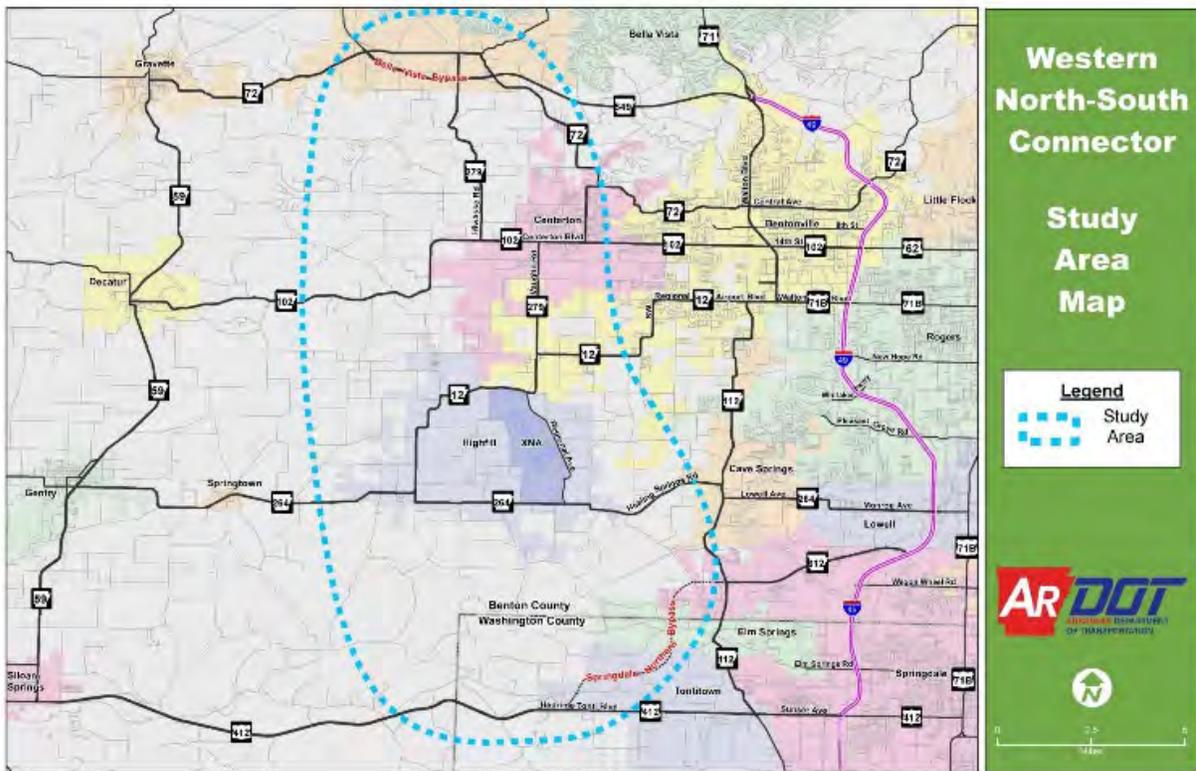


In 1998, TEA-21 identified the access road to the airport as a high priority project and authorized Federal-aid under the High Priority Project Program to partially fund the construction of the project. The project remains a priority for the region and is included in the 2045 MTP.

NORTH-SOUTH CONNECTOR STUDY

At the request of NWARPC, the Arkansas State Highway Commission passed Minute Order 2019-011, to study the need for and feasibility of a new highway connection from Highway 612 (Hwy. 412 Northern Bypass) to Highway 549 (Bella Vista Bypass) west of I-49 in Northwest Arkansas. The study will address existing and future traffic operations, historical crashes, and infrastructure conditions. In July 2020, ARDOT conducted a Public Involvement Meeting to obtain public input about the Western North-South Connector Study.

Figure 1: Study Area



BRIDGES – STATE, COUNTY, AND CITY OWNED

FHWA requires inspections on all bridges on Federal, State, and local (city/county) roadways based on National Bridge Inspection Standards (NBIS) and National Bridge Inventory (NBI). ARDOT is the coordinating agency between FHWA and local jurisdictions for the NBIS program.

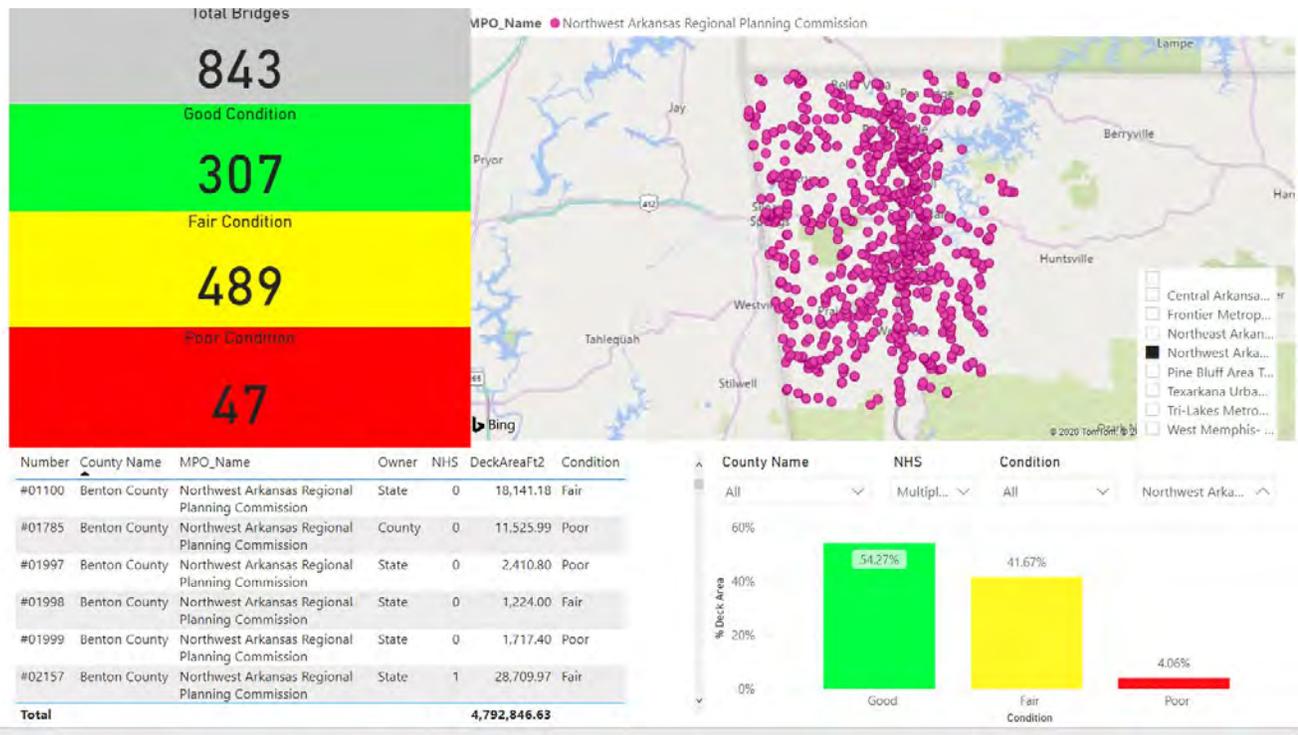
Public safety is the principal objective of the inspection program. ARDOT has developed “Local Government Procedures for Compliance with the National Bridge Inspection Standards” as prepared and distributed by ARDOT, September 2013.

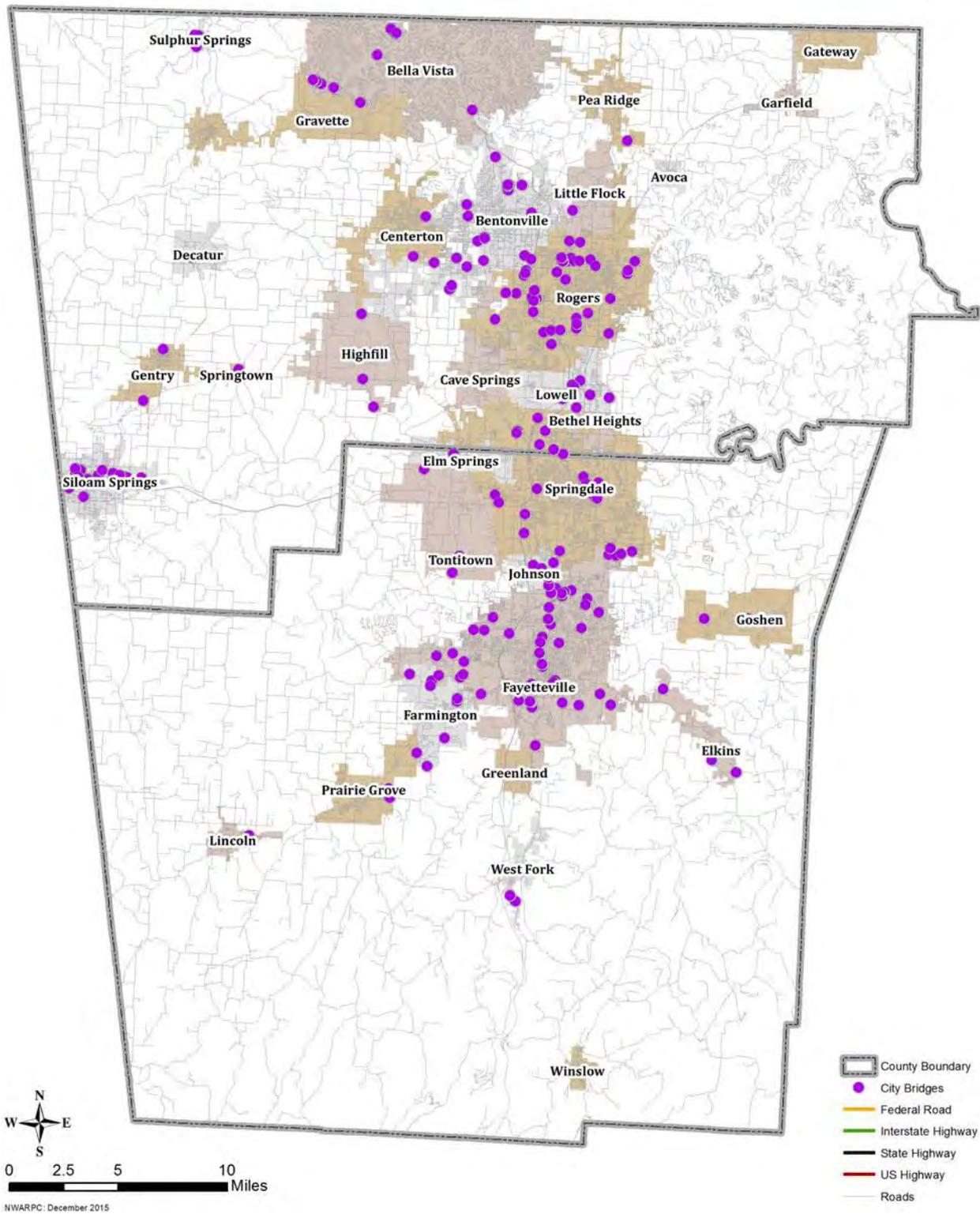
In 2015, the Arkansas State Highway Commission passed Minute Order 2015-083 to develop a Bridge Management System. The Bridge Management System is being utilized to meet MAP-21/FAST Act requirements that will help establish targets for the condition of the bridge inventory and performance measures to determine progress in meeting those targets. ARDOT currently uses the Deighton Total Infrastructure Asset Management System (dTIMS) software for pavement management. The same software will be utilized for State-owned bridges to help “predict the future condition of the bridge inventory based on different funding scenarios, priorities, and project selections.”

The NBIS inventory contains 843 bridges/structures within Benton and Washington County.

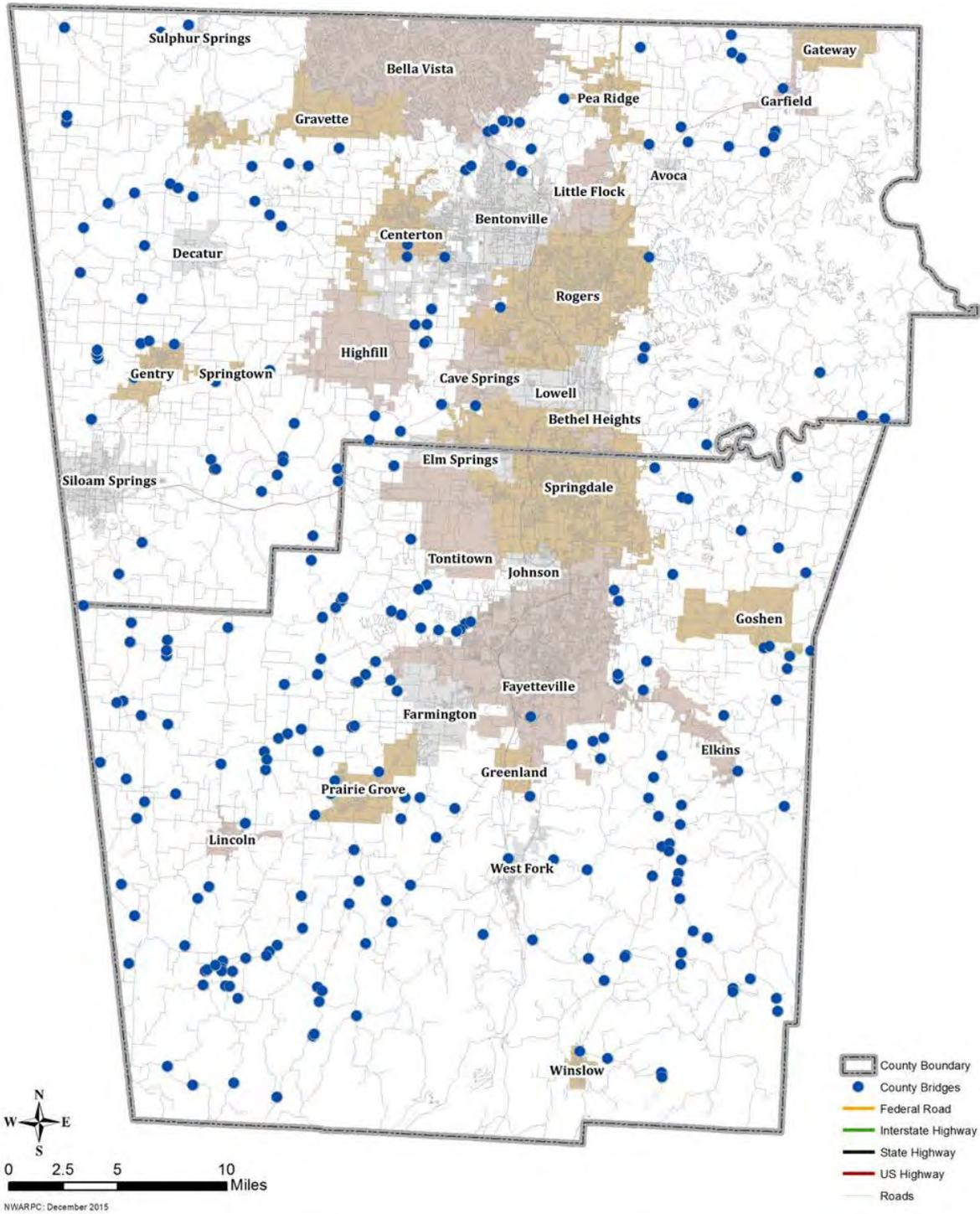
- 338 State and State Agency-Owned
- 260 County-Owned
- 210 City-Owned

For bridge priorities in Missouri, projects are selected as identified in MoDOT’s Southwest Bridge Plan. There are currently 29 State owned bridges within the MPA boundary in Missouri (McDonald County). The MoDOT bridge plan’s goal is to “ensure safety for the traveling public and to preserve connections over water features, railroads and other roads.” The MoDOT Southwest District Bridge Plan provides priorities for bridge rehabilitation and replacement projects based on condition, available funding, and designation as a primary or supplementary route.

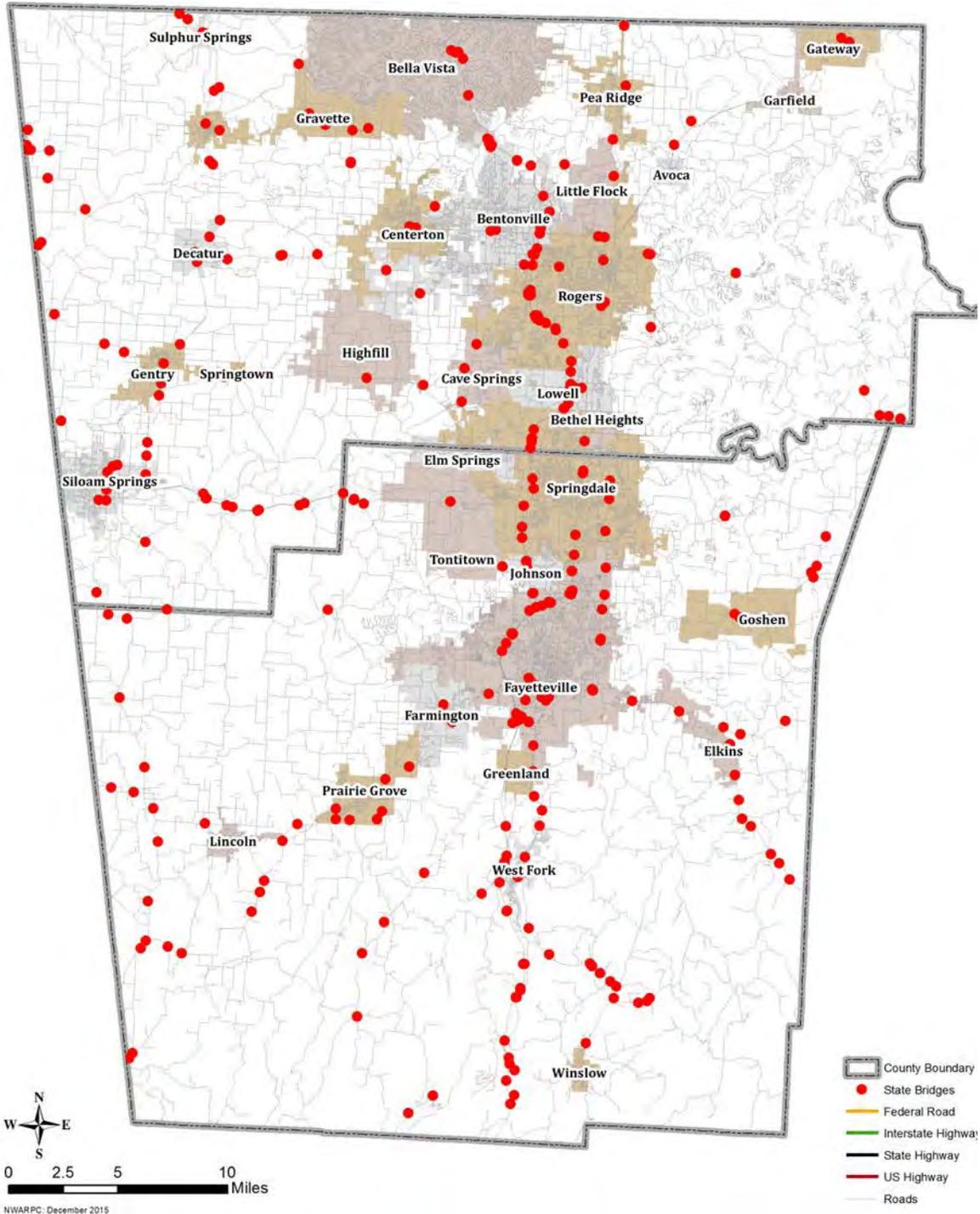




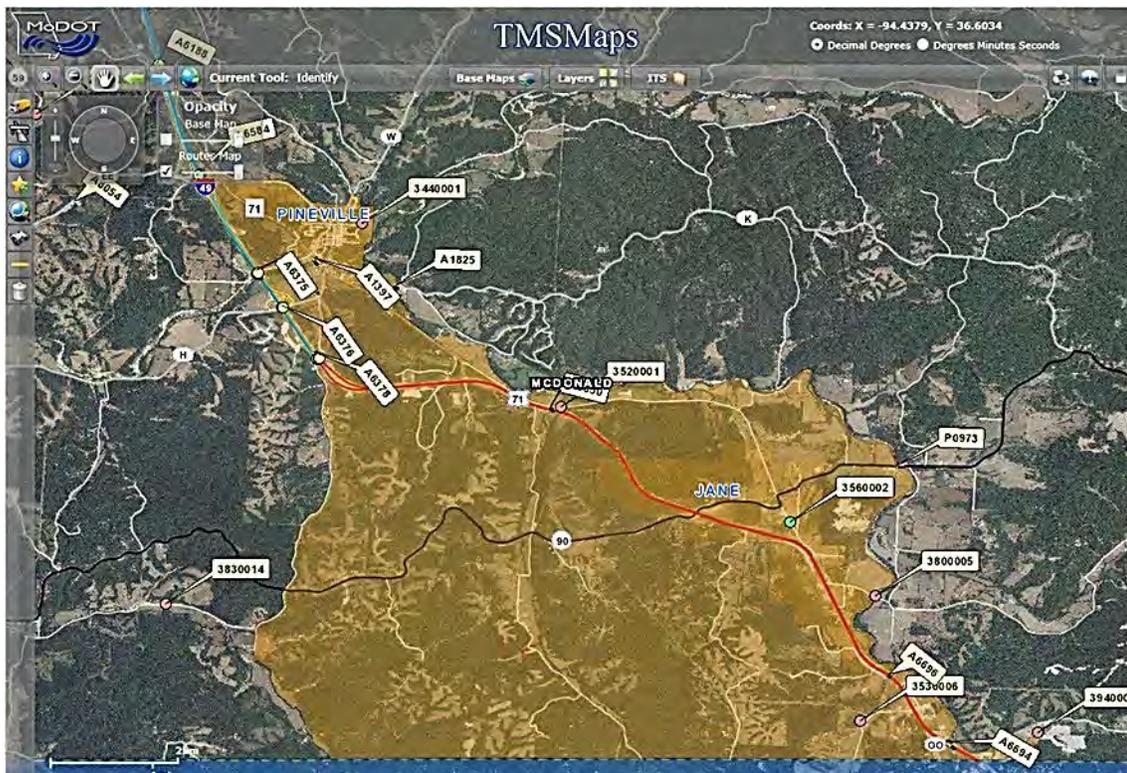
Map 9.5 - Northwest Arkansas City Bridges



Map 9.6 - Northwest Arkansas County Bridges



Map 9.7 - Northwest Arkansas State Bridges



Missouri State Owned Bridges

BRIDGE FUNDING

Funding of bridge projects varies depending on how the bridge is functionally classified – on-system or off-system and the National Highway System (NHS) designation. The use of NHPP, STBGP, and STBGP-GT 200K Federal funds is based on meeting the current Federal eligibility requirements of the specific program. Bridges that meet the eligibility requirements and required local match may apply for Federal-aid through AHTD, MoDOT or NWARPC.

ARDOT NHPP funding estimates are based on the area's proportion of the Statewide highway lane miles of functionally obsolete and structurally deficient bridges on the NHS but off the Interstate system. STBGP on-system bridge funding estimates are based on the area's proportion of Statewide non-NHS functionally obsolete/structurally deficient bridge lane miles. STBGP off-system bridge fund estimates are based on the area's proportion of Statewide locally owned functionally obsolete/structurally deficient bridges on off-system routes (functionally classified as minor collector or local). These funds can only be spent on bridges on off-system routes. STBGP-GT 200K funds may also be used for bridge projects designated as on-system or off-system.

Bridge projects to replace or rehabilitate bridges are based upon bridge sufficiency ratings developed through regular inspections by ARDOT of all public bridges.

Estimated Funding for Bridges (Federal funds plus match - millions):

Type	2025-2030	2031-2035	2036-2045
NHPP Bridge	\$ 53.3	\$ 49.5	\$ 115.0
STBGP-Off-System	\$ 9.4	\$ 8.8	\$ 20.4

The complete list of bridges and structures are shown in the [Bridges and Structures in the Metropolitan Planning Area](#) document.

STATE AND LOCAL MAINTENANCE

ACT 416 and voter approved Issue 1 funding that are part of the Governor’s Long Term Highway Funding Plan provides additional dedicated funding for system preservation for both ARDOT and local jurisdictions. The 2045 MTP also lists NHPP funding for Pavement Preservation. NHPP Pavement Preservation and ACT 416 funding is not included in new project development and is assumed for preservation of the system.

STATE HIGHWAYS	COUNTY ROADS	CITY STREETS	
ACT 416	\$95 million	\$13 million	\$13 million
Issue 1	<u>\$205 million</u>	<u>\$44 million</u>	<u>\$44 million</u>
Total	\$300 million	\$57 million	\$57 million

FEDERAL-AID TRANSPORTATION PROJECTS LISTED IN THE FFY 2021 to 2024 TIP AND LOCAL TRANSPORTATION BOND PROGRAMS

The following tables provide a summary of the federal-aid projects programmed in the approved FFY 2021 to 2024 TIP and local transportation bond projects from the four largest cities. Three out of the four largest cities have already approved bond issues for transportation projects and specific information related to each project can be found on each city website. Bentonville is scheduled to vote on their transportation bond program in April of 2021.

The following is a summary of the available transportation bond funding and potential projects, including Bentonville, if approved in April 2021.

City	Approximate Amount	Election Year
Bentonville	\$ 173,500,000	13-Apr-21
Fayetteville	\$ 73,925,000	2019
Rogers	\$ 178,000,000	2018
Springdale	\$ 92,710,000	2018
Total	\$ 518,135,000	

Projects listed in the FFY 2021 to 2024 TIP; the NWARPC awarded STBGP-A, TAP, and HIP Projects; and local Transportation Bond Programs are considered “Constrained Projects” listed in the 2045 MTP with available funding based on forecasted federal and local funding.

FFY 2021 TO FFY 2024 SUMMARY TABLE OF TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

Federal Fiscal Year	Job No	Job Name	County	Route No	Length	Job Type	TIP Estimate x 1,000	Carrying Out
2021	040683	Hwy. 62 – Clyde Carnes Rd. (Hwy. 170) (Farmington) (S)	Washington	170	1.97	Major Widening	\$9,905	Local
2021	090377	SW "I" - Moberly Lane (8th Street Widening) (Bentonville) (S)	Benton	CS	1.399	Major Widening	\$14,400	Local
2021	090431	Little Sugar Creek Str. & Apprs. (Little Flock)	Benton	94	0	Strs. & Apprs.	\$3,100	State
2021	090433	Hwy. 264/Bellview St./Spring Creek Rd. Inters. Impvts. (Lowell) (S)	Benton	264	0	Intersection Improvements	\$2,185	State
2021	NARTS35	Various NARTS TAP Attrib Projects	Benton & Washington			Miscellaneous	\$625	Local
2021	NARTS36	Various NARTS Attrib Projects	Benton & Washington			Miscellaneous	\$9,163	Local
2021	NARTS37	NARTS Planning	Benton & Washington			Planning	\$250	Local
2022	040720	Poplar St. – Drake St. (Fayetteville) (S)	Washington	112	1.57	Major Widening	\$7,800	Local
2022	040746	Truckers Dr. – Howard Nickell Rd. (Fayetteville) (S)	Washington	112	1.417	Major Widening	\$16,000	State
2022	040846	Hwy. 62 Intchg. Impvts. (Fayetteville) (S) (Includes 15th Street Overpass)	Washington	I-49	0	Interchange Improvements	\$49,800	State
2022	090338	Dixieland Rd. – 8th St. (Rogers) (S)	Benton	71B	1.01	Major Widening	\$9,900	State
2022	090506	Illinois River Str. & Apprs. (Hwy. 59) (S)	Benton	59	0	Str. & Apprs.	\$10,000	State
2022	090558	Sulphur Springs – Decatur (Passing Lane) (S)	Benton	59	2.426	Passing Lanes	\$2,900	State
2022	NARTS35	Various NARTS TAP Attrib Projects	Benton & Washington			Miscellaneous	\$625	Local
2022	NARTS36	Various NARTS Attrib Projects	Benton & Washington			Miscellaneous	\$11,998	Local
2022	NARTS37	NARTS Planning	Benton & Washington			Planning	\$250	Local
2023	012305	Hwy. 412 – Springdale Bypass (S)	Benton & Washington	112	4	Major Widening	\$29,000	State
2023	012326	Hwy. 412 – Hwy.112 (Springdale Bypass) (S)	Benton & Washington	612	6.194	Project Development	\$14,400	State
2023	040785	Stone Bridge Rd. – East Roberts Rd. (Fayetteville) (S)	Washington	16	1.21	Major Widening	\$4,300	State
2023	090069	Northwest Arkansas National Airport Access (P.E.)	Benton	New	3.598	Project Development	\$11,000	Local
2023	090238	Hwy. 279 South – Hwy. 102B (Centerton) (S)	Benton	102	1.11	Major Widening	\$5,300	State
2023	090636	Pleasant Grove Rd. – Hwy. 12 (S)	Benton	112	3.432	Major Widening	\$27,000	State
2023	04X114	Rock Creek Str. & Apprs. (West Fork) (S)	Washington	71	0	Str. & Apprs.	\$1,700	State
2023	09X025	Little Flint Creek Str. & Apprs. (S)	Benton	12	0	Str. & Apprs.	\$1,100	State
2023	NARTS35	Various NARTS TAP Attrib Projects	Benton & Washington			Miscellaneous	\$625	Local
2023	NARTS36	Various NARTS Attrib Projects	Benton & Washington			Miscellaneous	\$12,155	Local
2023	NARTS37	NARTS Planning	Benton & Washington			Planning	\$250	Local
2024	040860	Don Tyson Pkwy. Extension – Hwy. 412 (S)	Washington	112	1.696	Major Widening	\$11,000	State
2024	04X098	Baron Fork & Fly Creek Strs. & Apprs. (S)	Washington	45	0	Strs. & Apprs.	\$3,300	State
2024	09X168	Hwys. 62 & 102 Inters. Impvts. (Bentonville, Centerton, & Rogers) (S)	Benton	62 & 102	9.399	Intersection Improvements	\$10,000	State
2024	09X309	Hwy. 72 Interim Impvts. (Bentonville & Pea Ridge)	Benton	72	10.122	Various Improvements	\$7,200	State
2024	09X324	Hwy. 12/Hwy. 59 Signal & Inters. Impvts. (Gentry)	Benton	12 & 59	0	Intersection Improvements	\$1,000	State
2024	11X026	Hwy. 412 Corridor Impvts. (Sel. Secs.)	Boone, Lawrence, & Washington	Various	5.113	Widening & Intersection Improvements	\$20,000	State
2024	NARTS35	Various NARTS TAP Attrib Projects	Benton & Washington			Miscellaneous	\$625	Local
2024	NARTS36	Various NARTS Attrib Projects	Benton & Washington			Miscellaneous	\$12,315	Local
2024	NARTS37	NARTS Planning	Benton & Washington			Planning	\$250	Local

FFY 2021 TO FFY 2024 SUMMARY TABLE OF TRANSPORTATION IMPROVEMENT PROGRAM (TIP) TRANSIT

Federal Fiscal Year	Job No	Job Type	County	TIP Total Estimate x 1,000 COST	FTA 5307	FTA 5339	Local	Carrying Out
2021	NARTS01	Operating Assistance	Benton & Washington	\$1,708	\$854		\$854	Local-ORT
2021	NARTS02	Capital - Preventive Maintenance	Benton & Washington	\$476	\$381		\$95	Local-ORT
2021	NARTS03	Capital - Paratransit Service	Benton & Washington	\$386	\$309		\$77	Local-ORT
2021	NARTS04	Bus and Bus Facilities	Benton & Washington	\$228		\$182	\$46	Local-ORT
2021	NARTS05	Transit Operations	Benton & Washington	\$1,014			\$1,014	Local-ORT
2021	NARTS06	Operating Assistance	Benton & Washington	\$584	\$292		\$292	Local-UofA
2021	NARTS07	Capital - Preventive Maintenance	Benton & Washington	\$271	\$217		\$54	Local-UofA
2021	NARTS08	Capital - Paratransit Service	Benton & Washington	\$158	\$126		\$32	Local-UofA
2021	NARTS09	Capital - Rolling Stock/Support Equipment	Benton & Washington	\$739	\$628		\$111	Local-UofA
2021	NARTS10	Bus and Bus Facilities	Benton & Washington	\$214		\$182	\$32	Local-UofA
2021	NARTS11	Capital - Planning	Benton & Washington	\$125	\$100		\$25	Local-MPO
2021	NARTS12	Transit Operations	Benton & Washington	\$1,873			\$1,873	Local-UofA
2021	NARTS15	Consolidated Planning Grant (MPO)	Benton & Washington	\$748			\$150	Local-MPO
2022	NARTS01	Operating Assistance	Benton & Washington	\$1,742	\$871		\$871	Local-ORT
2022	NARTS02	Capital - Preventive Maintenance	Benton & Washington	\$486	\$389		\$97	Local-ORT
2022	NARTS03	Capital - Paratransit Service	Benton & Washington	\$394	\$315		\$79	Local-ORT
2022	NARTS04	Bus and Bus Facilities	Benton & Washington	\$231		\$185	\$46	Local-ORT
2022	NARTS05	Transit Operations	Benton & Washington	\$1,035			\$1,035	Local-ORT
2022	NARTS06	Operating Assistance	Benton & Washington	\$596	\$298		\$298	Local-UofA
2022	NARTS07	Capital - Preventive Maintenance	Benton & Washington	\$278	\$222		\$56	Local-UofA
2022	NARTS08	Capital - Paratransit Service	Benton & Washington	\$161	\$129		\$32	Local-UofA
2022	NARTS09	Capital - Rolling Stock/Support Equipment	Benton & Washington	\$754	\$641		\$113	Local-UofA
2022	NARTS10	Bus and Bus Facilities	Benton & Washington	\$218		\$185	\$33	Local-UofA
2022	NARTS11	Capital - Planning	Benton & Washington	\$125	\$100		\$25	Local-MPO
2022	NARTS12	Transit Operations	Benton & Washington	\$1,910			\$1,910	Local-UofA
2022	NARTS15	Consolidated Planning Grant (MPO)	Benton & Washington	\$763			\$153	Local-MPO
2023	NARTS01	Operating Assistance	Benton & Washington	\$1,800	\$900		\$900	Local-ORT
2023	NARTS02	Capital - Preventive Maintenance	Benton & Washington	\$490	\$392		\$98	Local-ORT
2023	NARTS03	Capital - Paratransit Service	Benton & Washington	\$400	\$320		\$80	Local-ORT
2023	NARTS04	Bus and Bus Facilities	Benton & Washington	\$232		\$185	\$47	Local-ORT
2023	NARTS05	Transit Operations	Benton & Washington	\$1,055			\$1,055	Local-ORT
2023	NARTS06	Operating Assistance	Benton & Washington	\$606	\$303		\$303	Local-UofA
2023	NARTS07	Capital - Preventive Maintenance	Benton & Washington	\$280	\$224		\$56	Local-UofA
2023	NARTS08	Capital - Paratransit Service	Benton & Washington	\$164	\$131		\$33	Local-UofA
2023	NARTS09	Capital - Rolling Stock/Support Equipment	Benton & Washington	\$765	\$650		\$115	Local-UofA
2023	NARTS10	Bus and Bus Facilities	Benton & Washington	\$220		\$187	\$33	Local-UofA
2023	NARTS11	Capital - Planning	Benton & Washington	\$125	\$100		\$25	Local-MPO
2023	NARTS12	Transit Operations	Benton & Washington	\$1,940			\$1,940	Local-UofA
2023	NARTS15	Consolidated Planning Grant (MPO)	Benton & Washington	\$765			\$153	Local-MPO
2024	NARTS01	Operating Assistance	Benton & Washington	\$1,920	\$960		\$960	Local-ORT
2024	NARTS02	Capital - Preventive Maintenance	Benton & Washington	\$494	\$395		\$99	Local-ORT
2024	NARTS03	Capital - Paratransit Service	Benton & Washington	\$405	\$324		\$81	Local-ORT
2024	NARTS04	Bus and Bus Facilities	Benton & Washington	\$235		\$188	\$47	Local-ORT
2024	NARTS05	Transit Operations	Benton & Washington	\$1,075			\$1,075	Local-ORT
2024	NARTS06	Operating Assistance	Benton & Washington	\$610	\$305		\$305	Local-UofA
2024	NARTS07	Capital - Preventive Maintenance	Benton & Washington	\$282	\$225		\$57	Local-UofA
2024	NARTS08	Capital - Paratransit Service	Benton & Washington	\$167	\$133		\$34	Local-UofA
2024	NARTS09	Capital - Rolling Stock/Support Equipment	Benton & Washington	\$775	\$659		\$116	Local-UofA
2024	NARTS10	Bus and Bus Facilities	Benton & Washington	\$222		\$189	\$33	Local-UofA
2024	NARTS11	Capital - Planning	Benton & Washington	\$125	\$100		\$25	Local-MPO
2024	NARTS12	Transit Operations	Benton & Washington	\$1,970			\$1,970	Local-UofA
2024	NARTS15	Consolidated Planning Grant (MPO)	Benton & Washington	\$770			\$154	Local-MPO

NWARPC SURFACE TRANSPORTATION BLOCK GRANT PROGRAM-ATTRIBUTABLE (STBGP-A), HIGHWAY INFRASTRUCTURE PROGRAM (HIP) AND TRANSPORTATION ALTERNATIVES PROGRAM (TAP) PROJECTS

LOCAL JURISDICTION - STBGP-A, TAP, and HIP FUNDED PROJECTS (Constrained Projects)	TAP-FEDERAL	STBGP-A- FEDERAL/HIP/CRRSSA HIP	TOTAL FEDERAL	STATUS
Bella Vista	\$ -	\$ 5,372,010	\$ 5,372,010	
Mercy Way Bridge and Road Imps - Razorback Greenway Ext.	\$ -	\$ 5,372,010	\$ 5,372,010	On-going
Benton County		\$ 2,347,408	\$ 2,347,408	
Fisher Ford Bridge Project AHTD Job # 090385		\$ 847,408	\$ 847,408	Complete
Wagon Wheel Road		\$ 1,500,000	\$ 1,500,000	On-going
Bentonville	\$ 664,199	\$ 6,797,130	\$ 7,461,329	
8th Street		\$ 4,564,686	\$ 4,564,686	On-going
McCullum Rd Side path	\$ 160,000		\$ 160,000	On-going
Razorback Greenway Relocation - I-49 SPU CA	\$ 250,000		\$ 250,000	On-going
SW I St. and Hwy. 102 Intersection		\$ 1,100,000	\$ 1,100,000	Complete
US 71B (N. Walton Blvd.) and 12th St. Intersection		\$ 1,132,444	\$ 1,132,444	On-going
Walton Blvd Trail Construction Project	\$ 254,199		\$ 254,199	Complete
Bentonville-Centeron		\$ 982,640	\$ 982,640	
Greenhouse Road Improvements		\$ 850,000	\$ 850,000	On-going
Greenhouse Road Improvements CRRSAA 2021 HIP Funding		\$ 132,640	\$ 132,640	On-going
Centeron	\$ 250,000	\$ 1,215,000	\$ 1,465,000	
Hwy 102B/Seba Rd. Intersection Improvements		\$ 1,215,000	\$ 1,215,000	Complete
McKissic Creek Trail	\$ 250,000		\$ 250,000	On-going
Farmington		\$ 7,615,152	\$ 7,615,152	
Hwy 170 (Hwy. 62 to Clyde Carnes Road)		\$ 7,615,152	\$ 7,615,152	On-going
Fayetteville	\$ 938,502	\$ 16,177,190	\$ 17,115,692	
Cato Springs Trail Lighting	\$ 320,000		\$ 320,000	Complete
Gordon Long Park Trailhead	\$ 260,000	\$ -	\$ 260,000	On-going
Highway 112 Side path Trail CRRSAA 2021 HIP Funding		\$ 230,891	\$ 230,891	On-going
Hwy 112 (Razorback Rd) - Hwy 180 (6th St) to Leroy Pond		\$ 1,080,000	\$ 1,080,000	Complete
Hwy 45/Old Wire Traffic Signal and Inters. Imps.		\$ 950,484	\$ 950,484	Complete
Hwy 112 - Maple Street Impvts. and Traffic Signal-Maple/Razorback		\$ 2,400,000	\$ 2,400,000	Complete
Rupple Rd. (Wedington Drive to Starry Night)		\$ 5,774,303	\$ 5,774,303	Complete
Sain Street Ext. (N. Front St. to Vantage Blvd.)		\$ 5,741,512	\$ 5,741,512	On-going
Town Branch Trail Job # 040603	\$ 358,502		\$ 358,502	Complete
Fayetteville-Washington Co.		\$ 280,000	\$ 280,000	
Highway 112/Howard Nickell Road Intersection Improvements		\$ 280,000	\$ 280,000	On-going
Gravette	\$ 81,041		\$ 81,041	
Trail System	\$ 81,041		\$ 81,041	Complete
Lowell	\$ 90,000	\$ 6,202,606	\$ 6,292,606	
Hwy 264/Belview Road Intersection Imps. Roundabout		\$ 750,000	\$ 750,000	On-going
KJMP Trailhead/Connector Trail	\$ 90,000		\$ 90,000	On-going
S. Dixieland Road Extension		\$ 5,452,606	\$ 5,452,606	Complete
NWARPC		\$ 699,512	\$ 699,512	
Cave Springs Area Karst Resource Conservation Study		\$ 499,512	\$ 499,512	Complete
NARTS TSMO-ITS		\$ 200,000	\$ 200,000	On-going
Rogers	\$ 777,246	\$ 8,701,354	\$ 9,478,600	
28th Place Phase 1 (Pleasant Grove to Greens/Blossom Way)		\$ 944,400	\$ 944,400	On-going
AR94/A&M/Easy Street		\$ 531,600	\$ 531,600	On-going
Dixieland Road and A&M Railroad		\$ 419,659	\$ 419,659	Complete
Highway 62 Intersection Safety (two Intersections)		\$ 40,000	\$ 40,000	Complete
JB Hunt Road (Pauline Whitaker Park to Bellview Rd)		\$ 3,062,891	\$ 3,062,891	On-going
Mercy Phase II Restroom	\$ 120,000		\$ 120,000	Complete
New Hope Bicycle and Pedestrian Bridge	\$ 445,199		\$ 445,199	Complete
Walnut Street/US 71B (Dixieland Rd to 8th St.)		\$ 3,702,804	\$ 3,702,804	On-going
Walnut Street/US 71B BB0903 Sidewalks	\$ 212,047		\$ 212,047	On-going
Siloam Springs	\$ 493,000	\$ 72,215	\$ 565,215	
E. Main St Trail Ext	\$ 118,000		\$ 118,000	Complete
Hico Trail from Wash. St to Cheri Whitlock Pkwy	\$ 250,000		\$ 250,000	On-going
Lake Francis/Washington St. Sidewalks	\$ 125,000		\$ 125,000	On-going
Lake Francis/Washington St. Sidewalks CRRSAA 2021 HIP Funding		\$ 72,215	\$ 72,215	On-going
Springdale	\$ 1,107,745	\$ 11,874,217	\$ 12,981,962	
Deans Trail Ph. 1	\$ 506,745		\$ 506,745	Complete
Don Tyson Parkway Ext. (S. 56th St. to Hwy. 112)		\$ 300,000	\$ 300,000	On-going
Don Tyson Parkway Ext. (S. 56th St. to Hwy. 112) CRRSAA 2021 HIP Funding		\$ 1,228,145	\$ 1,228,145	On-going
Elm Springs Rd. Intchn. Imprvts. AHTD Job BB0413		\$ 1,480,000	\$ 1,480,000	Complete
Gene George Blvd (Don Tyson to 1000 ft. South)		\$ 4,236,970	\$ 4,236,970	On-going
Gene George Blvd. Phase II CRRSAA 2021 HIP Funding		\$ 1,062,605	\$ 1,062,605	On-going
I-540/Don Tyson Parkway Interchange		\$ 3,382,275	\$ 3,382,275	Complete
Lake Springdale Trailhead	\$ 226,000		\$ 226,000	Complete
Spring Creek Trail	\$ 250,000		\$ 250,000	On-going
Watkins Ave. Bike-Ped Bridge over I-49	\$ 125,000		\$ 125,000	On-going
Watkins Ave. Bike-Ped Bridge over I-49 HIP CRRSAA 2021 Funding		\$ 184,222	\$ 184,222	On-going
Hwy 265 Springdale		\$ 2,164,052	\$ 2,164,052	
ARDOT Hwy 265 Randall Wobbe - Hwy 264 Job 012007		\$ 2,164,052	\$ 2,164,052	Complete
Springdale-Johnson		\$ 404,000	\$ 404,000	
56th Street Ext. (Don Tyson to Johnson Mill)		\$ 404,000	\$ 404,000	On-going
Tontitown		\$ 360,000	\$ 360,000	
US 412 and Klenc Rd Signalization		\$ 360,000	\$ 360,000	On-going
U of A		\$ 334,055	\$ 334,055	
Razorback Road -ADSB to Hotz -Widening CRRSAA 2021 HIP Funding		\$ 334,055	\$ 334,055	
Grand Total	\$ 4,401,733	\$ 71,598,541	\$ 76,000,274	

LOCAL TRANSPORTATION BOND PROGRAMS

Bentonville Potential Street Improvement Projects Special Election Tuesday, April 13, 2021 \$173,500,000 https://www.bentonvillebond.com/streets	
E Battlefield Boulevard - E Central Ave. to Water Tower Rd.	
Greenhouse Road - 28th St. to Glen Rd	
Greenhouse Road - Glen Rd. to SW Elm Tree Rd.	
Greenhouse Road - SW Regional Airport Blvd. to SW 28th St.	
J Street Interchange - Tiger Blvd. to Interstate 49	
McCollum Drive - End of McCollum Dr. to NE J St.	
Medical Center Parkway - SE 28th St. to SE S St.	
O Street - SW 28th St. to SW 14th St.	
Rainbow Curve Improvements	
Redbud Street - SW E St. to SW A St.	
S Walton Blvd. and SE 28th St. Intersection	
S Walton Blvd. and Walmart Entrance Intersection	
SE 28th St. and SE J St. Intersection	
SE Moberly Lane - SE 14th St. to SE 8th St.	
SE Moberly Lane - SE 28th St. to SE Walton Blvd.	
SE Walton Blvd. and SE J St. Intersection	
SE Walton Blvd. and SE Medical Center Pkwy. Intersection	
SW 14th St. and Been Rd./Turnbridge Dr. Intersection	
SW 14th St. and S Walton Blvd. Intersection	
SW 28th Street - SW Featherston Rd. to SW I St	
SW A Street - SW 8th St. to Walton Blvd.	
SW A Street - W. Central Ave. to 8th St	
SW Bright Road - SW Regional Airport Blvd. to 28th St.	
SW Gator Boulevard - S Morningstar Rd. to SW Gator Blvd.	
SW I St. and SW 41st St. Intersection	
SW Regional Airport Blvd. and S Vaughn Rd. Intersection	
SW Regional Airport Blvd. and SW I St. Intersection	
Tiger Boulevard Overpass - McCollum Dr. to NE Grammercy Rd.	
Town Vu Road - City Limits (~Gower Ct.) to SW Tater Black Rd.	
Walton Blvd. and Central Ave. Intersection	
Water Tower Road - SE 6th St. to E Battlefield Blvd.	
Fayetteville \$73,925,000 2019 Bond Potential Street Improvement Projects https://www.fayetteville-ar.gov/3604/Street-Improvement-Projects	
Appleby/Plainview/Rolling Hills Connection	
15th/Razorback Intersection	
Shiloh Dr./Fulbright Expressway Intersection	
Center/Harmon Intersection	
Steamboat/Dorothy Jeanne St. Connection	
Ripple Road Extension	
Sain Street Extension	
Archibald Yell Blvd. Safety Improvements	
Maple Street Cycle Track	
Zion Road Improvements	
Futtrall/Gregg & Shiloh/Gregg RR Crossings	
Highway 71B Corridor	
North Street Corridor	
Millsap St/College Ave Intersection Improvements	
Old Wire Road Cycle Track	
Rolling Hills Improvements	
Joyce Blvd. Safety Improvements	
Pavement Maintenance/Overlays	
Downtown Sidewalk/Walkability Improvements	
MLK-Area Walkability Improvements	
Signal Hardware/Software Upgrades	
Additional Traffic Signal Installation	
Midtown Corridor Project	

LOCAL TRANSPORTATION BOND PROGRAMS

Rogers \$178 million 2018 Bond Potential Street Improvement Projects https://www.rogersar.gov/393/Projects
8th St Sidewalk Improvements - Poplar St to New Hope
28th Place - South
Arkansas St. Gateway (N): Chestnut St to Union St
Arkansas St. Gateway (S): Oak St to Chestnut St
Bellview Road South
Bellview CO 3- Garrett Road
DTR - Easy Street Extension
NW - Easy Street Extension
Garrett Road Extension
Interstate 49/Hwy 71B Single Point Urban Interchange
JB Hunt Drive
Laurel Avenue
Magnolia Street Overpass
Oak Street Overpass
Oak Street Extension East
Pinnacle Hills Parkway Roundabouts/Uptown Connectivity
Pleasant Grove Road Ph. III
Poplar Street Improvements
Uptown Overpass
Walnut Widening: Dixieland Road - 8th Street
Stoney Brook/Rainbow Road/Dodson Road
Mobility Hub - Downtown
1st St Improvements
2nd & Cherry St
3rd Street
Springdale Street Improvement 2018 Bonds and 1% Sales and Use Tax \$92,710,000 https://www.springdalear.gov/776/Street-Improvement
40th Street - 18BPS4
48th Street - 18BPS9
64th Street
Ball Road and County Line Road - 18BPS8
Dixieland Road - 18BPS14
Don Tyson Parkway
Ford Avenue
Gene George Boulevard
Huntsville Avenue
Maple Avenue
Pump Station Road Bridge
Watkins Avenue
Watkins 48th to Gene George
Har-Ber Avenue to Emma Avenue Extension
56th Street South Phase I
Intersection Realignments



CHAPTER 10. ACTIVE TRANSPORTATION

Northwest Arkansas' population is growing rapidly. Public support and advocacy for improved conditions for bicycling and walking have grown even faster, as evidenced by community input and community funding towards facilities. This emphasis on non-motorized transportation reflects a desire by the region's population for livable walkable communities, in which young and old alike are able to move about.

Almost every transportation improvement is an opportunity to enhance the safety and convenience of walking and bicycling. Bicycle and pedestrian needs must be given "due consideration" under Federal surface transportation law (23 U.S.C. 217(g)(1)). This consideration should include, at a minimum, a presumption that bicyclists and pedestrians, including persons with disabilities, will be accommodated in the design of new and improved transportation facilities.

The benefits of non-motorized transportation include health and environmental as well as economic. Businesses are increasingly concerned about locating in livable communities in order to attract and retain employees.

Bicycling and walking are important elements of an integrated, intermodal transportation system. Constructing sidewalks, installing bicycle parking at transit, teaching children to ride and walk safely, installing curb cuts and ramps for wheelchairs, striping bike lanes and building trails, all contribute to our transportation goals of safety, mobility, economic growth and trade, and to the enhancement of communities and the natural environment, and security.

NORTHWEST ARKANSAS REGIONAL BICYCLE AND PEDESTRIAN MASTERPLAN

The Northwest Arkansas Regional Bicycle and Pedestrian Plan was adopted by the RPC/Policy Committee on December 1, 2015 and is considered part of the 2045 MTP. The purpose of this Plan is to build upon previous regional bicycle and pedestrian initiatives, including the 37-mile Razorback Regional Greenway, in setting a clear path for Northwest Arkansas to link its communities and regional destinations with a world-class transportation network.

This Plan is a regional network of bicycle and pedestrian on-road and off-road trail facilities and routes within 34 communities of Northwest Arkansas and Southwest Missouri in Benton, Washington and McDonald Counties.
<http://www.nwabikepedplan> and <http://nwarpc.org>.

The Plan recommendations provide both a long-term vision and short-term steps that move communities quickly towards projects on the ground and Walk/Bike Friendly Community (BFC/WFC) designations. Short-term recommendations address bicycle and pedestrian safety issues, provide bicycle and pedestrian connectivity to important destinations, connect to the Razorback Regional Greenway spine, and include programmatic recommendations covering all Five E's: Engineering, Education, Encouragement, Enforcement, and Evaluation.

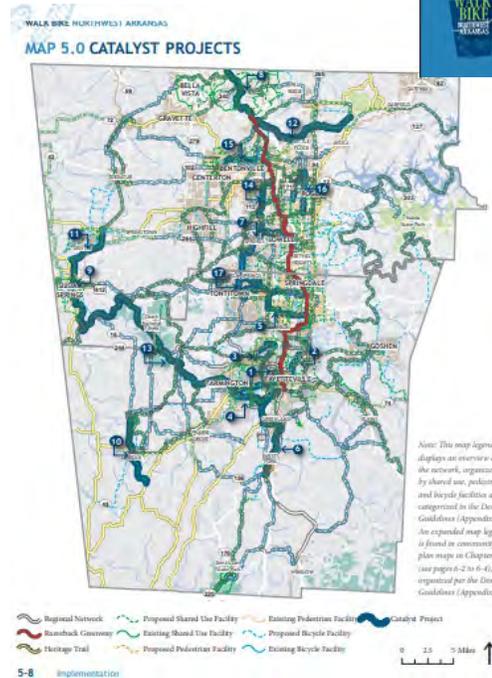
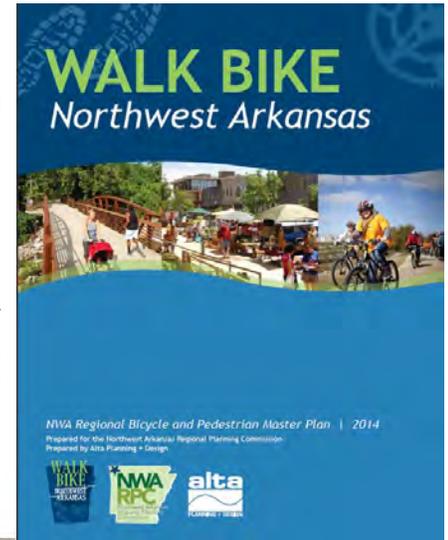
The Plan is also built around the integration of a “6th E” for Equity, ensuring that a balanced approach is provided for people of all ages, abilities and backgrounds. The Plan also includes a Resource Appendix with design guidelines, sample complete street resolutions, a needs analysis, program recommendations, a complete project list and much more. There have been multiple amendments since the Plans adoption in 2015.

CATALYST PROJECTS AND PROGRAMS

The Plan calls for 20 Catalyst projects and programs that will enhance opportunities for walking and biking in a variety of contexts in the NWA region. As the name suggest, these projects are intended to showcase the benefits of investing in walking and bicycling facilities and catalyze momentum for additional investments in the future.

Bike/Ped Catalyst Projects

- 1 University of Arkansas Loop
- 2 NE Fayetteville Loop
- 3 NW Fayetteville Loop
- 4 Fayetteville to Farmington Loop
- 5 West Springdale Loop
- 6 Fayetteville to West Fork
- 7 Watershed Sanctuary (Cave Springs)
- 8 Bella Vista to MO Border
- 9 Siloam Springs City Lake to Kayak Park
- 10 Lincoln to Cane Hill
- 11 Gentry to Siloam Springs
- 12 Little Sugar Creek
- 13 Farmington to Siloam Springs
- 14 Bentonville to Cave Springs and Elm Springs
- 15 Bentonville to Centerton (2nd/McKisic Creek)
- 16 Rogers N-S Connectors
- 17 Elm Springs to Tontitown Loop



Map 10.1 – Catalyst Projects

Bike/Ped Catalyst Programs

1. Regional Safe Routes to School
2. Complete Streets Policy
3. Non-Motorized Transportation Training for Engineers and Planners

Vision Statement:

Northwest Arkansas' trail and roadway system will comfortably, safely, and efficiently accommodate bicycle and pedestrian transportation. The linking of local and regional attractions will make the area a world-class bicycle and pedestrian destination. Walking and bicycling will become a common, enjoyable, and viable transportation and recreation choice that promotes active living and a high quality of life in Northwest Arkansas

AMENDMENTS

The Plan has had multiple amendments to accommodate communities developing new plans, new strategic plans, and changes in strategies. The following amendments have been adopted:

- Amending the NWA Regional Bicycle and Pedestrian Master Plan adding the local Community Plans of City of Highfill (Res 2019-05), City of Garfield (Res 2018-14), City of Avoca (Res 2017-12), City of Pineville, MO (Res 2017-12) and Community of Jane, Mo (Res 2018-14).
- 2019-06 Amending the NWA Regional Bicycle and Pedestrian Master Plan for Arkansas Highway 112 Side Path
- 2019-07 Amending the NWA Regional Bicycle and Pedestrian Master Plan and Adopting the NWA Bike Infrastructure Plan Targeted Bicycling Priority Network
- 2019-08 Adopting the USBR 51
- 2020-11 Amending the NWA Regional Bicycle and Pedestrian Master Plan amending catalyst project #14 Bentonville to Cave Springs and Elm Springs to the Highway 112 Corridor from Bentonville to Fayetteville and Catalyst Project #16 from the Razorback Greenway Fayetteville/West Fork via Greenway along AR/MO Railroad to the Greenland Nature Park

NWA BIKE INFRASTRUCTURE PLAN – TARGETED BICYCLING PRIORITY NETWORK

The NWA Bike Infrastructure Plan was adopted by the RPC/Policy Committee on December 4, 2019. This Plan created targeted bicycling priority networks with corridor concept designs for the recommended network. Implementation guidance was recommended with cost estimates. Additionally, Design Guidance for new and improved infrastructure was provided for future project design. This Plan and Targeted Bicycle Network Strategy Plans for Fayetteville, Springdale, Rogers and Bentonville can be found at nwarpc.org.

There were multiple network projects designated and a 10% design was completed.

Bentonville:

- Coler Creek Downtown Corridor
- C Street-14th Street Link
- 8th Street Bikeway

Rogers:

- 13th Street
- Olive Street Trail
- Crosstown Trail

Springdale:

- 40th Street-Downtown Connector
- Don Tyson Trail

Fayetteville:

- Three Trails Bikeway
- Mission-Razorback Connector

Johnson/Springdale:

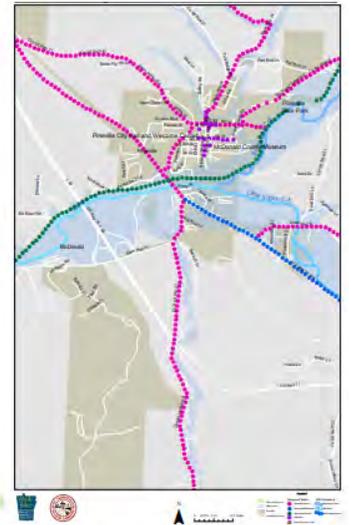
- Springdale-Johnson Bikeway



Figure 10.1 – Bike Infrastructure Design Example

INDIVIDUAL ADOPTED COMMUNITY PLANS

Individual Community Plans, adopted by local jurisdictions, detail existing and proposed bicycle and pedestrian transportation and recreation facilities. The initial Plan included all 25 Northwest Arkansas communities with a population of 1,000 or more. Since the adoption of the Plan multiple cities have developed plans and have been amended into this Plan and include: City of Highfill, City of Garfield, City of Avoca, City of Pineville, Mo, and Community of Jane, MO. The network includes on-road and off-road facilities such as shared use paved trails, separated bikeways, sidewalks, and shared roadways.



THE E’S FOR BECOMING A BIKE/WALK FRIENDLY REGION

A comprehensive approach to create bicycle and walk-friendly communities is more effective than a singular approach that only addresses infrastructure issues. Recognizing this, the national Bicycle Friendly Community program, administered by the League of American Bicyclists, and the Walk Friendly Community program, administered by the National Center for Walking and Bicycling, recommend a multifaceted approach based on the five E’s: Engineering, Education, Encouragement, Enforcement, and Evaluation. A sixth ‘E’, Equity, is included in order to fulfill the goals and vision of this Plan. The recommendations in this Plan are based on addressing all of these categories at the regional and local level. Short term recommendations are made based upon an assessment of community readiness and need. The individual community plans for all 25 communities call for implementing the 5 E’s.

ENCOURAGEMENT

- » Organize a local event and promote a regional event
- » Visibility campaign
- » Social media outreach campaign/website link

EDUCATION

- » Attend a training session on ways to implement education goals
- » Implement one goal from training session (or other goal)
- » Coordinate with local Safe Routes to Schools efforts

ENGINEERING

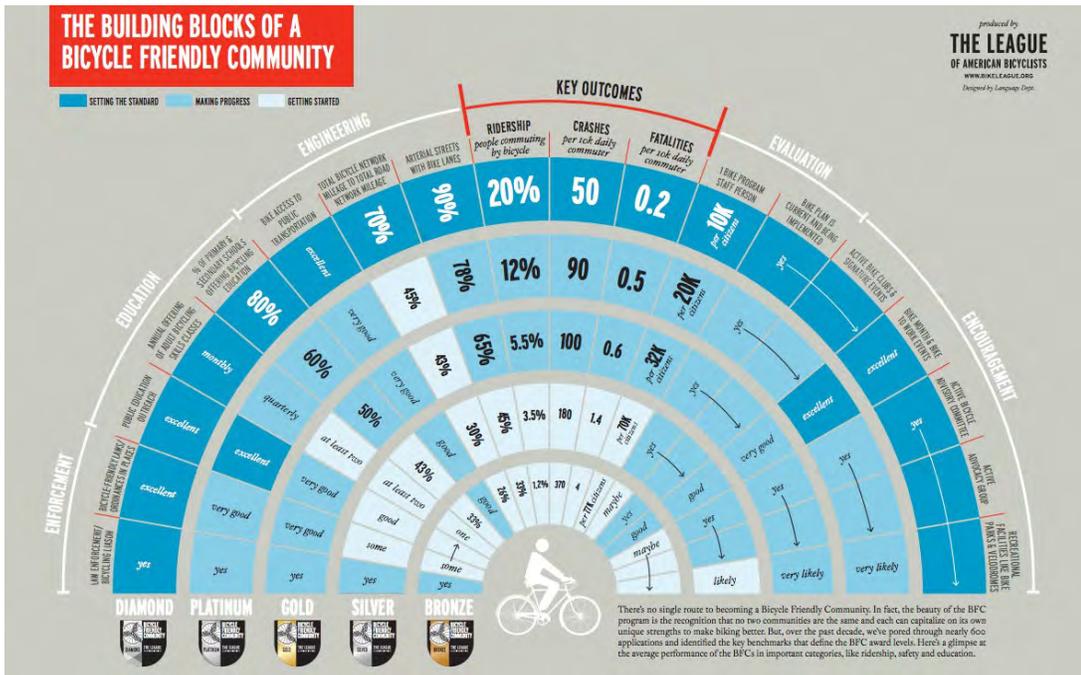
- » Attend a training session on trail design
- » Make progress toward an improvement project
- » Increase number of bike racks in the city

ENFORCEMENT

- » Attend a training on bike/pedestrian, safety/laws
- » Provide bike/pedestrian crash/incident reports quarterly
- » Establish a police program for bike/pedestrian safety

EVALUATION

- » Generate an annual bike/pedestrian report card (needed by all entities)
- » Continue or establish trail surveys and counts
- » Attend annual meeting with policy, planners and engineers to evaluate collision trends, infrastructure needs and areas for targeted enforcement
- » Complete Bicycle Friendly Community application (starting in 2016)



5 E's TRAININGS, CONFERENCES AND WORKSHOPS

AS part of the 5 E's, ongoing training sessions, conferences and workshops are provided annually. Many law enforcement officers, planners, engineers, trail coordinator attend these sessions to gain more knowledge and to meet the 5 E's requirements. Past trainings, conference, and workshops include:

- November 11, 2016 - 7th International Mountain Biking Association World Summit
- March 10-11, 2016 – Conway, AR - Arkansas Chapter American Planning Association (APA) Spring Conference
- March 31, 2016 – Springdale, AR - Transportation Alternatives Program (TAP) training workshop
- April 27, 2016 – Fayetteville, AR - Road Conference on Pavement Management offered by Center for Training Transportation Professionals (CTTP)
- May 18-20, 2016 – Jefferson City, Mo - National Highway Institute (NWI) Training on Performance Measures and Safety Target Setting
- June 2016 People for Bikes Copenhagen, Denmark Study Tour
- August 24-25, 2016 – Jefferson City, MO - FHWA Transportation Performance Management Capacity Building
- May 3-6, 2017 – Seattle, WA – Congress for New Urbanism
- April 18-19, 2017 – AR Transportation Planning Conference
- November 13-14, 2017 – Growing Mobility for a Growing Region
- April 4, 2018 – Springdale, AR - ARDOT Transportation Alternatives Program and Recreational Trails Program Training
- April 4, 2018 – Springdale, AR - 5 E's Workshops
- April 12, 2018 – Springdale, AR - Arkansas Department of Parks and Tourism Grant Workshop
- May 9-11, 2018 Little Rock, AR - Transportation Systems Management and Operations (TSMO) Conference
- September 27-28, 2018 - Siloam Springs, AR - American Planning Association (APA) NWA Chapter Meeting
- October 8-12, 2018 - Boston, MA - Urban Land Institute (ULI) Conference -
- November 6-8, 2018 – Springdale, AR - National Association of City Transportation Officials (NACTO) Training
- January 30-31, 2019 – Little Rock, AR – FHWA SHRP2PlanWorks – Workshop
- March 14-15, 2019 – Bentonville, AR – National Trail Symposium
- May 2-3, 2019 – Little Rock, AR – APA Spring Conference
- July 10, 2019 -Springdale, AR - FHWA Bikeway Selection Guide Training Session
- August 1, 2019 – Bentonville, AR – PlacesForBikes Conference
- August 2, 2019 – Bentonville, AR – People for Bikes Summit
- September 10-12, 2019 – Little Rock AR – Arkansas Transportation Planning Conference
- September 30-October 4, 2019 – PeopleForBikes Netherlands Study Tour- City Builders Conference



FHWA Bikeway Selection Guide Training

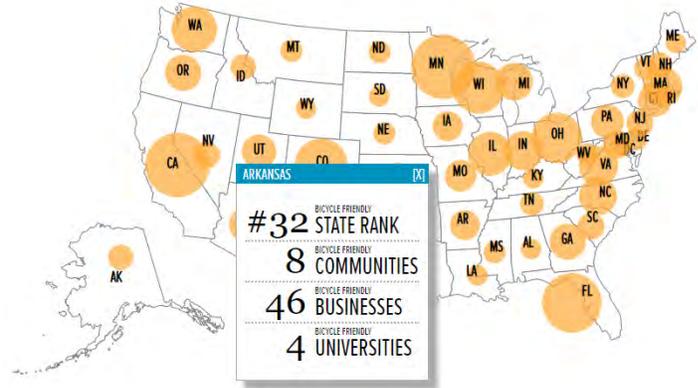


From Left: Sara Studdard, Matt Mihelavich, Jeremy Pate, Anya Bruhin

BICYCLE FRIENDLY COMMUNITY DESIGNATION

Every community in the region is unique and will develop in its own way – but will do so with a common vision of becoming more walkable, bikeable and livable places for residents, visitors, and businesses in Northwest Arkansas.

At the first Steering Committee meeting for the Plan, participants from each community were asked to define the level of success they would like to achieve, based on the national Walk/Bike Friendly Communities award levels of bronze, silver, gold and platinum. The consensus was that the region wanted to strive for platinum – to be recognized as one of the best places in the world for walking, bicycling, and quality of life.



This Plan was developed with that goal in mind, using the best available models for innovative design guidelines, support programs, and policies based on the specific conditions of Northwest Arkansas. Since that time multiple jurisdictions have received a ranking or have increased their ranking. The State of Arkansas is ranked #32 with 8 communities, 46 business and 4 universities ranked gold, silver or bronze. Significant improvements have been made in many communities allowing for these rankings.



In The University of Arkansas moved from silver to gold in 2019, the highest ranking in the State.

ARKANSAS			
UNIVERSITY	AWARD	ENROLLMENT	CITY
The University of Arkansas	Gold	27558	Fayetteville
Arkansas State University	Silver	14177	Jonesboro
University of Central Arkansas	Bronze	11487	Conway
Hendrix College	Bronze	1338	Conway

2020

City of Fayetteville received a renewed award at the Silver level. In 2016 the city became the first community in Arkansas to be awarded Silver status. Fayetteville was first designated as a Bronze Bicycle Friendly Community by the League in 2010.

2019

Northwest Arkansas - Benton and Washington Counties awarded Silver designation up from Bronze in 2015.
 City of Bentonville designated as Bronze level in 2019
 City of Springdale designated as Bronze level in 2019



2018

City of Rogers designated as Bronze level 2018



THE LEAGUE OF AMERICAN BICYCLISTS

The state of Arkansas ranks #32 for Bicycle Friendly Community from the League of American Cyclists. There are 8 Bicycle Friendly Communities in Arkansas and 4 Universities. There are 46 Bicycle Friendly Businesses in Arkansas: Bentonville-11, Conway-2, Fayetteville-25, Little Rock-3, North Little Rock-2, and Rogers-2. These rankings and additional information can be found on the League of American Bicyclists at <https://www.bikeleague.org/bfa/awards>.

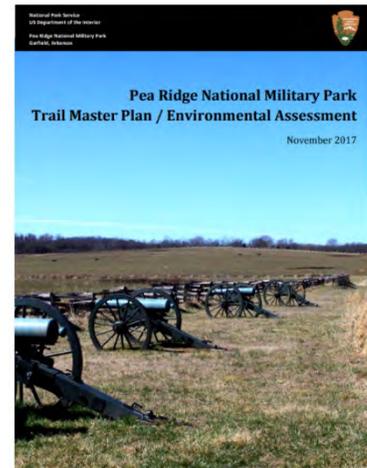
THE LEAGUE OF AMERICAN BICYCLISTS BICYCLE FRIENDLY COMMUNITY REPORT CARD

The League provides a report card for each community application providing a public profile on the League's award page and can be easily shared with elected officials and the media. It features key recommendations and statistics, and category scores. The report card features the most important – but not the only – indicators that were taken into consideration as part of the award decision. It also describes areas recommending improvements to get to next level of award.

PEA RIDGE NATIONAL MILITARY PARK TRAIL MASTER PLAN

NWARPC worked with Pea Ridge National Military Park (PRNMP) in its development of a trail plan.

The National Park Service promulgated special regulations for Pea Ridge National Military Park to allow bicycle use on two multi-use trails located within the park. One trail will be approximately 0.55 miles in length and the other will be approximately 1.17 miles in length. Both trails will require trail construction activities to accommodate bicycles and are therefore considered new trails that will be opened to bicycles. National Park Service regulations require promulgation of a special regulation to designate new trails for bicycle use off park roads and outside developed areas.



NWA ACTIVE TRANSPORTATION COMMITTEE

The Northwest Arkansas Active Transportation Committee began to have meetings on a monthly basis at the NWARPC office in the spring of 2009 as a small group of city officials, interest groups representatives and local citizens interested in trails and off-road transportation. The participation was open and highly encouraged by postings on the NWARPC website and listserv emails. The meetings concentrated at first on identifying where and how long the trail system in the two counties was and mapping the trails so that the group could get an overall, regional view of the Northwest Arkansas trail system. Another goal identified by the group was to look into expanding the Heritage Trail and develop a more comprehensive bicycle and pedestrian network for Benton and Washington Counties.

Since 2015, the Committee reviewed and recommended approval of multiple amendments to the NWA Bicycle and Pedestrian Master Plan including: Amending the NWA Regional Bicycle and Pedestrian Master Plan adding the local Community Plans of City of Highfill (Res 2019-05), City of Garfield (Res 2018-14), City of Avoca (Res 2017-12), City of Pineville, MO (Res 2017-12) and Community of Jane, Mo (Res 2018-14) Adopted Plan, 2019-06 Amending the NWA Regional Bicycle and Pedestrian Master Plan for Arkansas Highway 112 Side Path, 2019-07 Amending the NWA Regional Bicycle and Pedestrian Master Plan and Adopting the NWA Bike Infrastructure Plan Targeted Bicycling Priority Network, and 2020-11 Amending the NWA Regional Bicycle and Pedestrian Master Plan amending catalyst project #14 Bentonville to Cave Springs and Elm Springs to the Highway 112 Corridor from Bentonville to Fayetteville and Catalyst Project #16 from the Razorback Greenway Fayetteville/West Fork via Greenway along AR/MO Railroad to the Greenland Nature Park. Additionally, the Committee reviewed and made recommendation to adopt the USBR51 Route.

The Committee has discussed emergency response on the trail system and shared best practices with member jurisdictions. Multiple members worked together to improve emergency response within their cities. Fayetteville and Bentonville updated their CAD systems and improved the GIS data to assist with quicker response.

The Committee has served as the Razorback Regional Greenway Committee. At each meeting the Committee discussed activities on the Greenway including construction projects, detours, adding signage, striping, etc. In 2020, the NWA Greenway Alliance was formed and this group now manages the activities of the Greenway.

ONLINE REGIONAL NWA INTERACTIVE TRAILS MAP

The NWARPC, BikeNWA and the Northwest Arkansas Council staff developed a Northwest Arkansas Trails Online Map and supporting geodatabase at <https://trails.cast.uark.edu/>. The guidance on how to classify the trail types is based on the “Northwest Arkansas Regional Bicycle and Pedestrian Master Plan.” The database structure was developed and outlined in the “Northwest Arkansas Active Transportation Facilities - Reference Guide for GIS Coding, Mapping, and Tracking Existing Facilities by Facility Type” that can be viewed [here](#).

This guidance is used in collecting, maintaining, and mapping the trails in Northwest Arkansas. All completed trails are shown in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan and the online map at www.nwarpc.org or www.nwatrails.org/map/. As trails are being repaired or are under construction they are represented on the map with a dashed yellow and black line representing that hazard. This map is an interactive map so that the user can select a trail segment and gain information about that segment including everything in the attribute table. The creation of this map was a cooperative effort by NWARPC, The Bicycle Coalition of the Ozarks, the Center for Advanced Spatial Technology, and the Northwest Arkansas Council, with funding provided by the Endeavor Foundation and the Walton Family Foundation.



RAZORBACK GREENWAY ALLIANCE

The Northwest Arkansas Razorback Greenway was conceived, designed, and constructed as a world-class facility and an amenity of regional significance. During the planning phase, it was acknowledged by each city, that while each had its own operations and maintenance departments, a key to a sustainable quality Greenway over the length of the corridor would be a consistency of standards, cooperation and coordination and the building of enduring partnerships. Because of its unique regional characteristics, stewardship of the Greenway requires a non-traditional and uniquely cooperative approach to management and operations.

The Alliance is organized for the purpose of fulfilling a commitment made by each of the cities along the Razorback Greenway through the adoption of the "Northwest Arkansas Razorback Greenway Operations and Management Plan" to participate in a regional committee with the purpose of jointly and cooperatively facilitating the policies, goals, objectives, and recommendations outlined in the adopted Plan. The objective of the Alliance is to operate, promote, and maintain the world-class facility as an amenity of regional significance in a cooperative and coordinated manner to sustain the quality of the facility with consistency of standards, cooperation, and coordination building enduring partnership.

RAZORBACK GREENWAY

The idea of a regional greenway that stretches along a corridor from south Fayetteville to Bella Vista was discussed at various meetings that the Active Transportation Committee in the 2000's.

In an effort to further refine the regional greenway concept two workshops were organized in Northwest Arkansas in early 2010. The workshops involved a team of greenway experts from around the country with municipal representatives and corporate leaders from Northwest Arkansas. This effort served as a catalyst that offered the chance for the communities to work neighbor-to-neighbor on shared greenways opportunities and resulted in a coordinated strategy for the elected leadership of the region to capitalize on the exciting opportunities that a regional greenway system represents. The key outcome of the workshops was the creation of Northwest Arkansas Razorback Regional Greenway, a regional greenway vision that connects existing and proposed greenway sections into an innovative system. The momentum created by this new greenway vision was remarkable.

The project received funding of \$15M from the TIGER II (U.S. DOT's Transportation Improvements Generating Economic Recovery) program, with a match share of \$3.75M from the Walton Family Foundation. Because of the unique combination of involved elected officials and community interest, philanthropic support, and private sector leadership, this project was able to capitalize on the TIGER II program to quickly put in place a nationally significant project that would take other regions years to accomplish.

The Northwest Arkansas Razorback Regional Greenway was completed in early 2015. The grand opening was held on May 2, 2015 at the Shiloh Square in Springdale. Many features have been installed along the Greenway including trailheads, benches, watering stations, etc.

In early 2015, a mile marker sign program began with installation of 37 mile markers from the trail beginning in south Fayetteville at "0" to trail end at marker 37 in Bella Vista with funding being provided by each of the six cities.

In 2016, the wayfinding sign program was developed, and approved the Active Transportation Committee and the Cities. The package was funded by the Walton Family Foundation and included for the wayfinding signs. Signage included wayfinding signs, trailheads, kiosks, thermoplastic, etc.

The NWA Greenway Alliance is working to "refresh" the Greenway signage system beginning 2021

RAZORBACK GREENWAY PROJECT – HENRY AWARD

NWARPC Director Jeff Hawkins and John McLarty accept the Henry Award for the Razorback Greenway project at the 2016 Henry Awards Ceremony, as part of the Governor's Tourism Conference. The Razorback Regional Greenway received the Natural State Award. NWAPRC accepted the award for the completion of the Razorback Regional Greenway in a ceremony in Springdale in March 2016. The award is presented for a project that "stands out in the crowd" because of its unique appeal, media coverage, creative approach, and enhancement of community pride, thus benefiting the state's quality of life. The Henry Awards honor Henri de Tonti, the man historians consider one of the first "Arkansas Travelers".

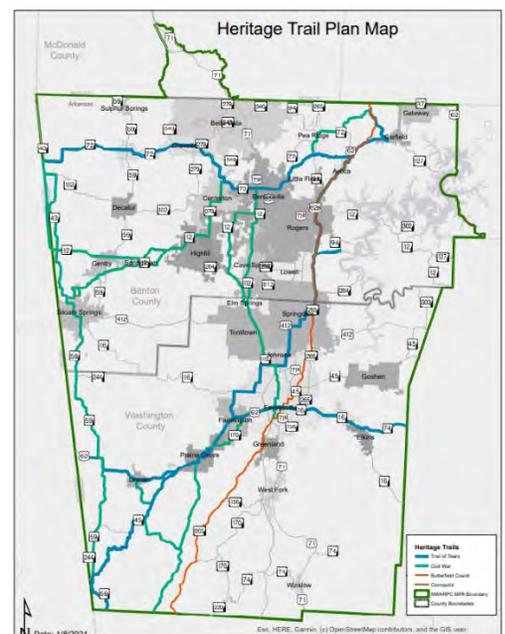


Jeff Hawkins and John McLarty

HERITAGE TRAIL PLAN

The Heritage Trail Plan describes a regional network for proposed bicycle and pedestrian facilities within the two counties of Northwest Arkansas, which combines the historic Butterfield Stagecoach Route, the Trail of Tears and Civil War trails into automobile, bicycle, and pedestrian facilities that connect Northwest Arkansas citizens and visitors to heritage, recreational, and cultural assets, a healthier lifestyle, and to each other. The entire network can be seen, at a minimum, as a bicycle route with improvements along the route providing safety for bicyclists. Within the more populated areas, where pedestrian traffic is anticipated, the improvements will also accommodate safe pedestrian travel.

These routes are marked with unique signage and are promoted with informational brochures. As such, the Heritage Trail system can double as an auto tour guiding citizens and visitors to the region's attractions and points of interest. Map 10.3 illustrates the Heritage Trail Plan. The full Plan is considered a part of the 2045 MTP and can be viewed [here](#). Modifications were made to the Heritage Trail Plan and adopted by Heritage Trail Partners on January 15, 2021 and then adopted by the RPC/NWARPC by Resolution #2021-01 on January 27, 2021.



In 2017, working in conjunction with the Arkansas Chapter of the Trail of Tears Association, seventeen Trail of Tears Historic Routes signs were installed in Benton County including along the Old Wire Road through Cross Hollow near Lowell and six signs in the City of Rogers. More Original Route signs are planned for Benton and Washington Counties.



In 2019 the Heritage Trail Partners (HTP) worked with the City of Fayetteville and the Arkansas Department of Transportation to install two Heritage Trail signs on a portion of the Razorback Greenway that runs parallel to Highway 265 near the Kessler Mountain Regional Park. Forty Heritage Trail signs were purchased by the Benton County Historical Preservation Commission and began being placed in November 2020 along Civil War Routes from the Pea Ridge National Military Park area to Highway 43 north of Siloam Springs.



Heritage Trail Partners continues work with the Shiloh Museum and the City of Springdale to protect, preserve, and interpret the Fitzgerald Farmstead property in Springdale. This site is important due to its connections to The Trail of Tears, the Butterfield Overland Mail route, and the Civil War troop movements. The Fitzgerald Farmstead is part of a trailhead for the Fitzgerald Mountain trail system and will also be used to provide the public with an increased knowledge of and appreciation for the rich history of Northwest Arkansas.



On December 15, 2020, the Heritage Trail Partner Board approved the following recommendation for the Heritage Trail Plan. “When major road improvements are made to Heritage Trail routes where the Northwest Arkansas Bicycle/ Pedestrian Master Plan calls for a paved sidepath, and where other major road improvements have the potential to connect to the region’s existing and future paved multi-use trail network, the preferred cross section from the Heritage Trail Plan would be a 10 to 12-foot multiuse side path along one side of the route with a six-foot sidewalk on the other side.”

TRAIL PROJECT HIGHLIGHTS

Table 10.X summarizes the trails that have been completed since 2015 by jurisdiction.

Table 10.1 - City Trail Highlights

	2016	2017	2018	2019	2020	Total
Bella Vista	39.6	1.1	0.4	36.3	7.8	85.3
Blowing Springs Grnwy Sidepath			0.4			0.4
Blowing Springs Trails	0.5					0.5
Little Sugar Trails				36.3	7.8	44.1
The Back 40	39.1	1.1				40.2
Benton County			3.7	20.6	0.8	25.0
Hobbs State Park Trails				17.9		17.9
Lake Wedington Trails				2.0		2.0
Little Sugar Trails					0.8	0.8
Orchard Trail				0.7		0.7
Siloam Springs Lake Trails			3.7			3.7
Bentonville	10.9	10.9	11.9	3.0	0.0	36.8
8th Street Trail			0.0			0.0
Applegate Trail			2.4		0.0	2.5
Applegate Trail 3rd St Access Trail				0.1		0.1
Applegate Trail North Gate Flyover			0.1			0.1
Bella Vista Lake MBT			0.7			0.7

Coler Trails	8.3	6.9	0.8	0.8		16.9
Compton Gardens Trails			0.1			0.1
Hidden Springs Trail	0.5	0.2	0.2			0.9
Lake Bentonville Dam Trail		0.1				0.1
Momentary Trail			0.2			0.2
North Forest Trails		1.3				1.3
OuterBike Crystal Bridges					0.4	0.4
Park Springs Park MTB Trails		0.1				0.1
Razorback Regional Greenway	0.4	0.1	0.7			1.2
Slaughter Pen Trail	0.2	0.7	1.5	1.7		4.1
Tiger Trails		1.6	1.5			3.1
Trail of Two Cities	1.5					1.5
Tristan			2.0			2.0
Walton Blvd Sidepath			0.1			0.1
West Bentonville Trail			0.3			0.3
Wolf Creek Park Trails			1.4			1.4
Fayetteville	4.2	10.9	4.3	5.6	0.6	25.6
Butterfield Bronco Trails	0.4					0.4

NWARPC 2045 Metropolitan Transportation Plan

	2016	2017	2018	2019	2020	Total
Cato Springs Trail		2.4	0.6			3.0
Clabber Creek Sidepath		0.1				0.1
Clabber Creek Trail	0.4	0.3	0.1			0.8
Fiesta Square Bike Lanes			0.1			0.1
Garland Street Sidepath			0.2			0.2
Goodwill Bike Lanes			0.0			0.0
Gregory Park				1.8		1.8
Gulley Park Trail				0.9		0.9
Hamestring Creek Trail				0.1		0.1
Happy Hollow Bicycle Course		0.5				0.5
Holcomb Bicycle Course		0.2				0.2
Kessler Mountain Trails		5.0		0.2		5.2
Lake Fayetteville Trails	0.2					0.2
Maple Street CycleTrack		0.0				0.0
Maple Street Sidepath				0.6		0.6
McNair Middle School Trail		0.1				0.1
Mud Creek Trail			0.4	0.2		0.6
Niokaska Creek Connector					0.0	0.0
Niokaska Creek Trail				0.3	0.5	0.7
Oak Ridge Hiking Trail				0.1		0.1
Oak Ridge MTB Trail				0.2		0.2
Old Wire Road Cycle Track				0.9		0.9
Old Wire Road Sidepath			0.4			0.4
Owl Creek Bicycle Course			0.3			0.3
Ramay Bicycle Course		0.5				0.5
Rolling Hills Bike Lanes			1.4			1.4
Rupple Road Sidepath	1.7	0.6	0.2	0.3		2.8
Shiloh Drive Sidepath					0.1	0.1
Town Branch Trail	1.1					1.1
Tsa-La-Gi Trail	0.3					0.3
Vandergriff Bicycle Course		1.3				1.3
W Alberta Sidepath	0.1					0.1
Woolsey Trail			0.4			0.4
Gravette					1.4	1.4
Gravette--UnNamed Trail Sidepath					1.4	1.4
Lowell			1.4	1.0		2.4
Dixieland Street Sidepath					0.8	0.8
JBHT Corp HQ Trails			0.9		0.2	1.1
Monroe Ave Sidepath			0.1			0.1
Mt Hebron Road Sidepath			0.4			0.4
Rogers	13.2	2.2	3.4	4.4	3.2	26.4
13th Street Sidepath			0.2			0.2
1st Street Sidepath	0.8		0.5	0.2		1.6
26th Street Sidepath			0.1			0.1
2nd Street Sidepath			0.2			0.2
40th Street Sidepath	0.2					0.2
43rd Street Sidepath	0.4					0.4
Bellview Road Sidepath	1.0				1.3	2.2
Cedar Street Sidepath				0.1		0.1
Cherry Street Sidepath	0.0					0.0
Dixieland Road Sidepath	0.0		0.3	0.2	0.1	0.7
Dodson Road Sidepath		0.1				0.1
Easy Street Sidepath			0.9	0.0		0.9

	2016	2017	2018	2019	2020	Total
Foxfire Connector	0.8					0.8
Frisco Springs Connector	0.4			0.0		0.4
Garrett Road Sidepath					0.4	0.4
Horsebarn Road Sidepath				0.1		0.1
JB Hunt Drive Sidepath			0.1	0.2		0.3
Lake Atalanta Loop	1.9					1.9
Lake Atalanta Trails	3.0					3.0
Magnolia Street Sidepath				1.1		1.1
Mercy Trails				1.2		1.2
Monte Ne	0.6					0.6
Monte Ne Road Sidepath			0.7			0.7
Northern Loop				1.0		1.0
Oak Street Sidepath	0.1		0.1			0.2
Olrich Street Sidepath	0.0					0.0
Osage Creek Trail	0.0					0.0
Perry Road Sidepath		1.2				1.2
Pinnacle Hills Sidepath	0.5					0.5
Pleasant Grove Road Sidepath					0.8	0.8
Pleasant Grove Sidepath					0.0	0.0
Pleasant Ridge Sidepath	0.1					0.1
Pleasant Ridge Trail	1.1		0.1	0.1		1.3
Price Lane Sidepath	1.0					1.0
Promenade Blvd Sidepath	0.1			0.2		0.3
Promenade Connector					0.1	0.1
Razorback Regional Greenway	0.7		0.1	0.1	0.1	1.0
Rogers Loop					0.2	0.2
Rogers Loop Sidepath					0.0	0.0
RRGreenway Bellview Access	0.1					0.1
Trail of Two Cities		0.9				0.9
Turtle Creek Spur	0.0					0.0
Turtle Creek Trail	0.3					0.3
Veterans Park Trail	0.0					0.0
Wallis Road Sidepath					0.1	0.1
Siloam Springs	9.5				0.2	9.8
Dogwood Springs Trails	0.3					0.3
Main Street Sidepath					0.2	0.2
Sager Creek Trails	9.3					9.3
Springdale	2.7		11.3	2.7		16.7
56th Street Sidepath	1.4					1.4
Charlie and Willie George Pk Trail	0.6					0.6
Dean's Trail				2.7		2.7
Fitzgerald Mountain Trails			8.8			8.8
Holcomb Street Bike Lane			0.4			0.4
Hutton Lane Sidepath	0.5					0.5
Hylton Road Sidepath	0.1					0.1
Johnson Road Sidepath			0.7			0.7
Maple Ave Bike Lane			1.3			1.3
Meadow Ave Bike Lane			0.1			0.1
Thunder Chicken	0.1					0.1
Washington County	0.0			11.6		11.6
Hylton Road Sidepath	0.0					0.0
Lake Wedington Trails				11.6		11.6
Total	80.2	25.2	36.4	84.1	15.0	240.9

TOTAL MILES OF TRAIL

Type of Trail	2015	2016	2017	2018	2019	2020
Shared Use Paved Trails	45	108	142	154	157	166
Shared Roadway	5	14	60	62	62	62
Bike Lanes	7	18	20	20	20	20
Protected Bike Lanes	1	1	1	4	7	7
Neighborhood Park	9	22	24	26	26	26
Soft Surface	55	143	218	253	323	332
Total	122	306	465	519	595	613

Table 10.2 - Total Miles of Trails

Entity	Shared Roadway	Bike Lanes	Protected Bike Lanes	Shared Use Paved	Neighborhood Park	Soft Surface	Total
Avoca	5				0.4		5.4
Bella Vista				0.5	1.2	91.5	93.2
Bentonville	28.7	1		37.5		48.4	115.6
Cave Springs					0.7	1.1	1.8
Centeron				1.2			1.2
Fayetteville	19.7	14.2	3.3	50.7	8.1	45.4	141.4
Gravette				1.4			1.4
Johnson				1.8			1.8
Lowell				5.2	1.7		6.9
Rogers	6.7			46.3	6.9	13.8	73.7
Siloam Springs		0.8		6.6		9.3	16.7
Springdale		2.1	3.7	15.2	5.5	12.2	38.7
Benton County	2.5				0.3	54.7	57.5
Washington County						56.5	56.5
TOTAL	62.6	18.1	7	166.4	24.8	332.9	611.8

Table 10.3 - Miles of Trails by Entity



Fayetteville: Old Wire Cycle Track Ribbon Cutting



Springdale: Deans Trail Construction

TRAIL COUNTS

Trail counts have been obtained by city officials and the Walton Family Foundation at different locations in the region for many trails on the regional network and especially the Greenway for many years. The Cities of Bentonville, Rogers, Springdale and Fayetteville have counters set out on multiple trails throughout the region. There are two electronic display counters, one in Rogers and one in Fayetteville. NWARPC has a counter that is loaned out for trail counting as well. An example of trail count data from the City of Rogers for Bellview Trail:

Bellview	2016	2017	2018	2019	2020
Jan	3397	2399	3372	3358	3930
Feb	4551	3759	2992	2988	5132
Mar	6297	5354	6991	6139	8119
Apr	8192	7538	7421	9866	16299
May	13550	12635	13628	13660	16071
Jun	12636	12225	11131	13595	21825
Jul	13154	13471	11819	14232	18275
Aug	13505	12958	11701	11829	20255
Sep	10529	6939	11178	13308	19037
Oct	5350	7804	7779	7868	12780
Nov	2914	5052	4188	4840	8227
Dec	1992	3130	3425	4357	

Table 10.4 - Bellview Trail Counter, City of Rogers

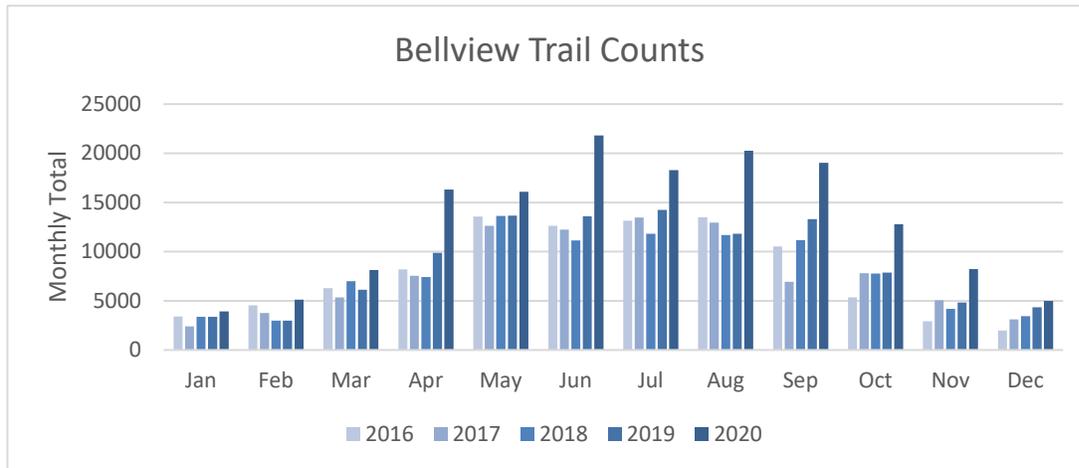


Figure 10.2 - Bellview Trail Counter, City of Rogers



New Hope Rd Trail Counter



NWARPC Counter Installed on Siloam Springs Pilot Project



2019 NWA TRAIL USAGE MONITORING REPORT - WALTON FAMILY FOUNDATION

The Walton Family Foundation has procured a report for the region for 2015, 2017 and 2019. Here are some highlights. The full report can be found at <https://www.waltonfamilyfoundation.org/about-us/newsroom/northwest-arkansas-reports-rising-trail-use-for-third-consecutive-study>.

Cycling and pedestrian activity has continued to grow since 2017. The 2019 study finds a 10% increase in cycling over the past two years and 36% growth since 2015. The report also finds a 2% increase in pedestrian activity over the past two years and 13% growth since 2015. • Activity levels on multi-use paths continued to climb, with the average volume across all count sites increasing 8% for cycling and 10% for pedestrians since 2017. While overall activity levels on natural-surface trails were higher in 2019 than in 2015, the average volume of bicycles and pedestrians across all the count sites decreased 8% and 24%, respectively, since 2017. Even so, six of the ten natural-surface trail count sites showed increased activity levels since 2017. • Cycling activity is still highest on the weekends, but pedestrian activity has shifted to higher numbers early in the week. Peak times on weekends continued to shift earlier from previous years, with the highest activity levels in mid-morning—around 9am for pedestrians and between 10 and 11am for bicycles. On weekdays, activity levels of all types peak at 6 p.m., which is consistent with previous years. • Activity levels on Northwest Arkansas trails relative to other more densely populated areas remain strong. Northwest Arkansas trails have higher levels of activity than San Diego when considering total population but have lower activity than best-in-class areas like Vancouver, Minneapolis and Portland.

In 2019, the trail network saw an average annual volume of 92,167 cyclists and 66,329 pedestrians per site. That equates to an average of 203 cyclists and 175 pedestrians per day on weekdays and 376 cyclists and 203 pedestrians per day on weekends. The average annual volume per site has grown considerably since the 2015 baseline study, with cycling activity up 36% and pedestrian activity up 13%. The majority of these gains, however, occurred between 2015 and 2017, when cycling increased 24% and pedestrian use increased 10%, with smaller increases occurring between 2017 and 2019, when cycling increased 10% and pedestrian use was up just 2%.

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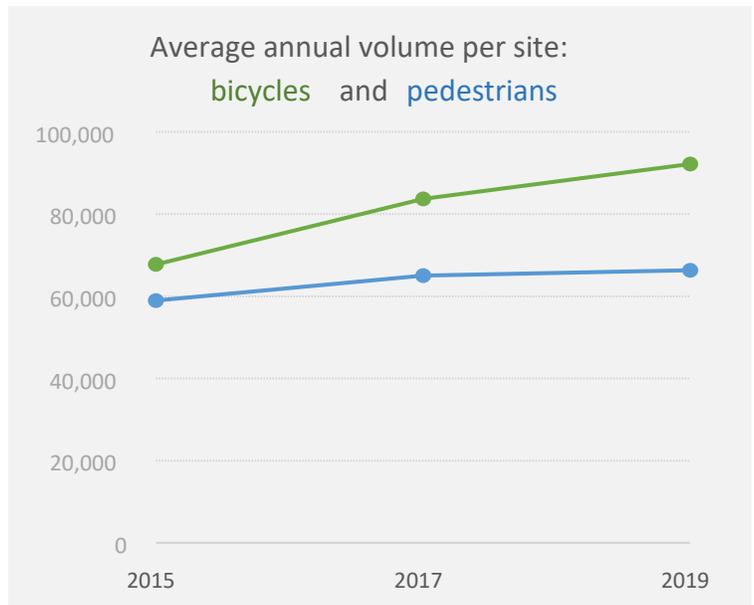


Figure 10.3 – Cycling and pedestrian Activity Network-wide

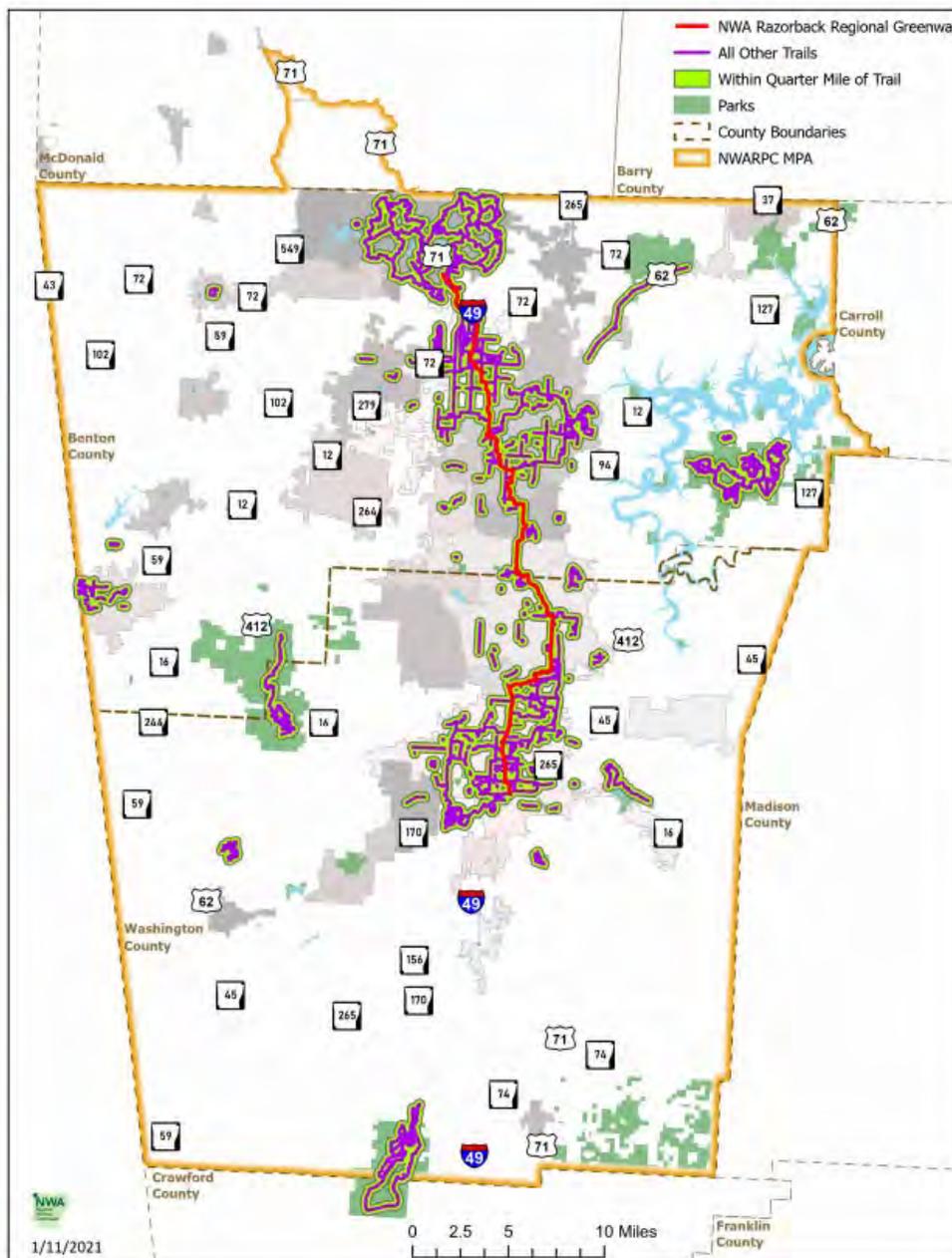
TRAIL ACCESSIBILITY

Trails are accessible by all populations. There are approximately 188,858 people within ¼ mile of the trails and bikeways (no sidewalks) and 75,945 housing units according to 2019 ACS Census. Table 10.7 and Map 10.5 were created using the 2019 ACS Census Bureau population and housing units per county and 2020 County residential addresses and 2021 trail database. A buffer of ¼ mile from all trail types was created and the population based on residential addresses multiplied by average population per housing unit. This is up from 120,929 population and 29% of region population in 2010.

Demographic		
Population*	Population Within 1/4 Mile	188,858
	% of Regional Population	36%

*Population – Source: 2019 ACS HU Calculated to Residential Addresses

Table 10.5 - 2019 Census Bureau Population within ¼ Mile of Trails



Map 10.2 - 2019 Census Bureau Population within ¼ Mile of Trails

USER DEMAND AND BENEFITS ANALYSIS

The increased walking and bicycling opportunities provided by the Razorback Regional Greenway and other existing bicycle and pedestrian facilities, combined with potential increases from projects proposed in this and other plans, will result in quantifiable benefits. As more people walk and bike more often, individuals and communities in the region will enjoy economic, health and environmental benefits, such as those that have been carefully documented in many cities and regions known for their high quality of life.

A variety of data sources were used to estimate the number of walking and bicycling trips currently occurring in Northwest Arkansas. Data on the average trip lengths of different trip types were used to convert the trip estimates into estimates of reduced vehicle miles traveled. This trip data, combined with peer reviewed literature, was then used to identify and monetize a number of benefits related to items such as reduced emissions, congestion, and health care costs. The tables below identify a range of potential low, medium, and high mode share scenarios for Northwest Arkansas. These scenarios are then used to estimate the benefits of walking and bicycling in the existing context as well as under each of the three aspirational scenarios (Tables 10.8 and 10.9). This and more information can be found in the NWA Bicycle and Pedestrian Master Plan.

Scenario	Commuter Mode Share		K-12 Mode Share		College Mode Share	
	Bike	Walk	Bike	Walk	Bike	Walk
Current*	0.18%	2.57%	0.67%	10.57%	0.77%	11.26%
Low	1.00%	3.00%	2.00%	12.00%	2.00%	12.00%
Medium	3.00%	4.00%	4.00%	15.00%	4.00%	13.00%
High	5.00%	5.00%	8.00%	18.00%	8.00%	14.00%

Table 10.6 - Existing and Potential Bicycling and Walking Rates in NWA

Benefit Factor	Annual Walking and Bicycling Benefits			
	Baseline	Low Scenario	Medium Scenario	High Scenario
Annual VMT Reduced	18,334,268	27,466,522	46,755,325	68,227,588
Reduced Hydrocarbons (pounds/year)	54,971	82,353	140,186	204,566
Reduced Particulate Matter (pounds/year)	408	612	1,041	1,519
Reduced Nitrous Oxides (pounds/year)	38,399	57,526	97,924	142,895
Reduced Carbon Monoxide (pounds/year)	501,210	750,861	1,278,165	1,865,159
Reduced Carbon Dioxide (pounds/year)	14,915,032	22,344,174	38,035,726	55,503,535
Benefit Factor	Annual Walking and Bicycling Benefits			
	Baseline	Low Scenario	Medium Scenario	High Scenario
Reduced Vehicle Emissions	\$386,475	\$578,978	\$985,575	\$1,438,198
Reduced Traffic Congestion	\$751,624	\$1,126,007	\$1,916,763	\$2,797,031
Reduced Vehicle Crashes	\$10,267,190	\$15,381,252	\$26,182,982	\$38,207,449
Roadway Maintenance Costs	\$2,750,140	\$4,119,978	\$7,013,299	\$10,234,138
Household Transportation Savings	\$10,358,861	\$15,518,585	\$26,416,759	\$38,548,587
Reduced Health Care Costs	\$2,970,254	\$3,944,740	\$5,706,420	\$7,889,337
Total Annual Benefits	\$27,484,544	\$40,669,540	\$68,221,798	\$99,114,740

Table 10.7 - Potential Annual Walking and Biking Benefits in the NWA Region

SAFETY

Safety of the transportation system is one of the National goals and a performance measurement area under MAP-21/FAST Act. Safety currently is measured nationally, by individual state, and by county based on data reported to the States and U.S. DOT.

SAFETY ANALYSIS

The existing conditions, as described in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan, provides a series of maps that describe the demand for walking and bicycling throughout the region compared to the supply of existing facilities. It also provides an assessment of the benefits of walking and bicycling based on walking levels and identifies potential benefits that can be realized through continued investments. Additionally, a safety analysis and suggestions for improved crash data collection are provided.

Data for crashes (2015-2019) involving pedestrians and bicyclists in Benton and Washington Counties, as reported by the Arkansas State Police are used to improve safety of the system.

BIKENWA BICYCLE SKILLS EDUCATION IN NWA SCHOOLS

Six schools in Northwest Arkansas will be granted a free-riding program to learn bike skills.

Bike NWA will provide a cycling program for middle school students. The program is called “Riding for Focus”. It will teach students the fundamentals of cycling and how to be safe. Anya Bruhin is the education program manager for Bike NWA. She said the program is built around the idea that cycling is good for physical, social, and mental well-being.

BICYCLE PILOT/DEMONSTRATION PROJECTS

Pilot projects are a great way to “test before you invest” in active transportation infrastructure so that data can be gathered and analyzed and then if needed changes made before permanent implementation. These projects are bringing best practices for the design of roadways to Northwest Arkansas.

2016 NWARPC PROJECT - Resolution 2016-2 authorized NWARPC to coordinate, manage, and assist with the implementation of bicycle pilot/demonstration projects in various location to test protected bike lane concepts. Projects in Bentonville, Rogers, and Fayetteville were tested. The intent of the project were to test protected bike lane concepts.

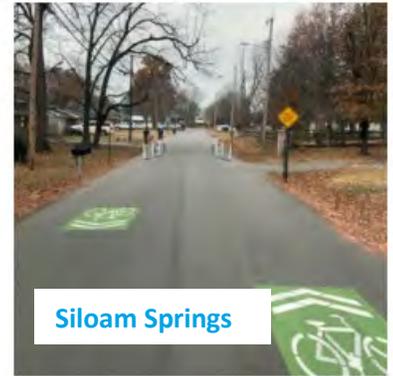
Sponsored by the Walton Family Foundation, Bike NWA was a series of month-long demonstration projects implemented by the Northwest Arkansas Regional Planning Commission, the Bicycle Coalition of the Ozarks, and three cities in Northwest Arkansas: Bella Vista, Bentonville, and Rogers. 2018-2019 BikeNWA Pilot Projects - BikeNWA has partnered with the cities of Fayetteville, Siloam Springs, and Springdale to implement a series of pilot projects that focus on creating safer streets for all users- people driving cars, people riding bicycles, and people walking.

These projects were funded by a grant from the Walton Family Foundation under their Home Region program that supports preserving and improving quality of life in our region.



All of the materials used in the projects are installed in a temporary manor so that they can be removed at the end of the 12 month pilot period. This allows each City ample opportunity to gather valuable insights and information about the projects that will ultimately inform the long-term outcome and viability for each project.

All three cities' projects are intended to better connect existing bicycle infrastructure, and retrofit existing roadways, to better serve those who bike for both recreation and transportation.



ARKANSAS STOP LAW – BICYCLE SAFETY

The Arkansas Stop – Bicycle Friendly Legislation was signed in April 2019. Starting July 1, 2019 Arkansas bicyclists have new rules. Gov. Asa Hutchinson signed Act 650 that allows cyclist to maintain their momentum.

Bicyclists in Arkansas can treat stop signs as yields and red lights as stop signs. The new law requires bicyclists to slow down when approaching a stop sign, but they don't have to stop unless it's necessary. Bicyclists must yield to any pedestrians who might be at the intersection. In regards to red lights, bicyclist must come to a complete stop, but may proceed through the intersection once traffic is clear.

<https://www.arkansasonline.com/news/2019/apr/07/new-biking-law-ready-to-roll-out-201904-1/>



Cooper School Trail, Bella Vista

NUMBER OF CRASHES

Crash data from the Arkansas State Police database has been used to show crash information for Benton and Washington Counties for 2015-2019. We have categorized non-motorists type as Pedestrian 1 and 2 (pedestrian and other pedestrian-wheelchair), Bicyclists 4-6 (scooter, bicyclist, other cyclist – tricycle, etc.) and other non-motorist 3, 7-11 (skater, ridden animal/animal-drawn, occupant of non-motor vehicle, occupant of a parked motor vehicle, other type of non-motorist, unknown non-motorist).

Figures 10.2 and Table 10.10 indicate there were approximately 95-141 reported crashes involving pedestrians and bicyclists annually that have resulted in 283 or more injuries and 36 fatalities over the course of five years. Bicycle and pedestrian crash numbers do not appear to have a trend up or down. Additional data on the number of bicycle trips that took place each year would be needed to understand if the crash rate (i.e., crashes per bicycle trip) is going up or down.

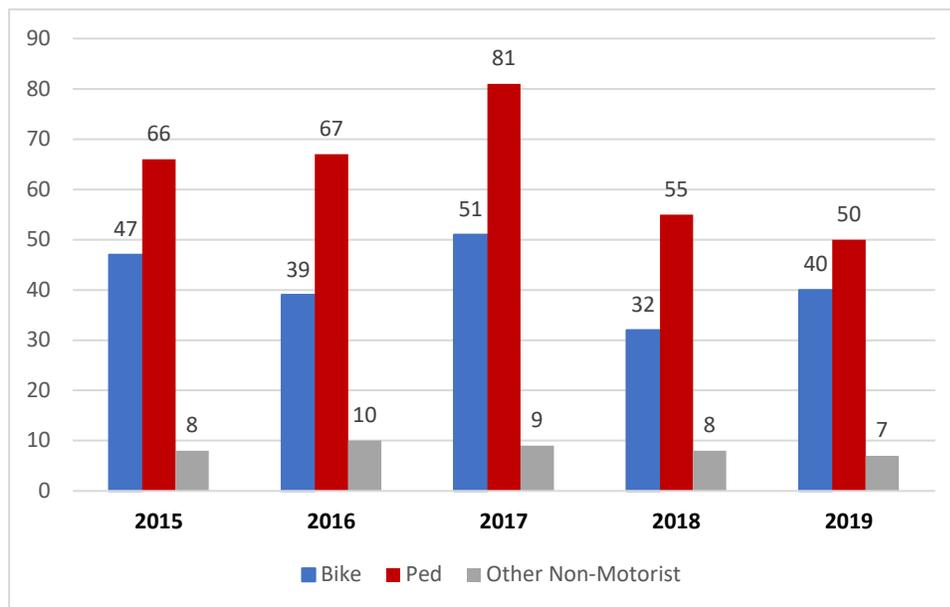


Figure 10.3 - Number of Bicycle and Pedestrian Crashes (2015-2019)

Severity	Bicycle	Pedestrian	Other Non-Motorist	Total
Fatality	4	31	1	36
Serious Injury	29	58	11	98
Non-serious Injury	81	99	5	185
Possible	51	73	5	129
Non-apparent	43	58	21	122
Grand Total	208	319	43	570

Table 10.8 - Number and Severity of Bicyclist and Pedestrian Crashes (2015-2019)

DAY OF WEEK

Pedestrian and bicyclist crashes happen throughout the week, likely indicating that people walk and bike for both recreational and utilitarian purposes. Collision activity appears to be lower on Sundays (Figure 10.3).

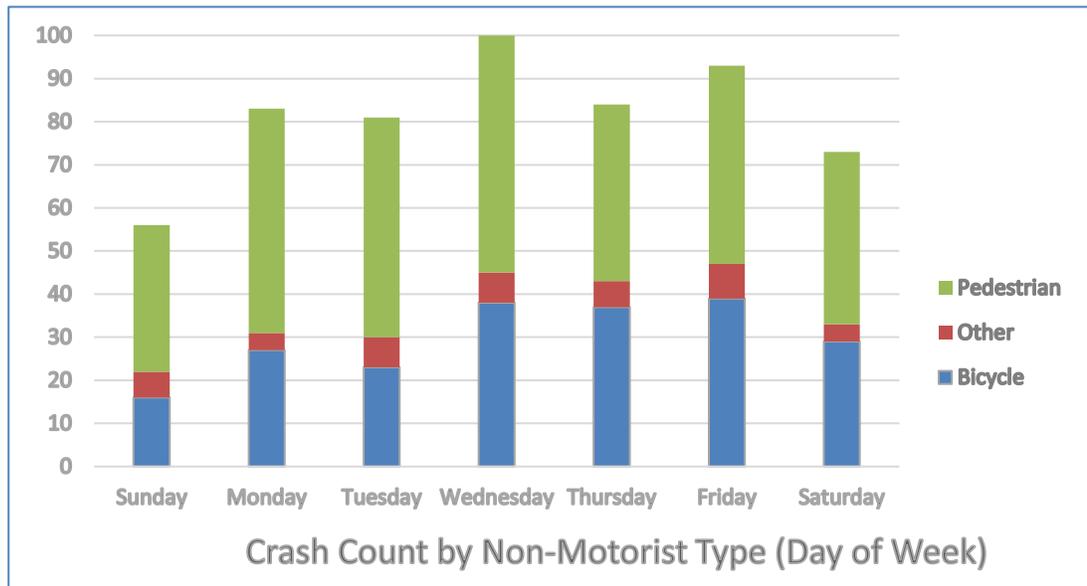


Figure 10.4 - Number of Bicyclist and Pedestrian Crashes (Day of Week)

MONTH OF YEAR

Similar to the distribution across the week, pedestrian and bicyclist crashes occur throughout the year, though the levels are somewhat higher in the warm summer months when activity is likely higher, due to the pleasant weather and longer daylight hours (Figure 10.4). Nonetheless, walking and biking appear to be year-round activities in NWA.

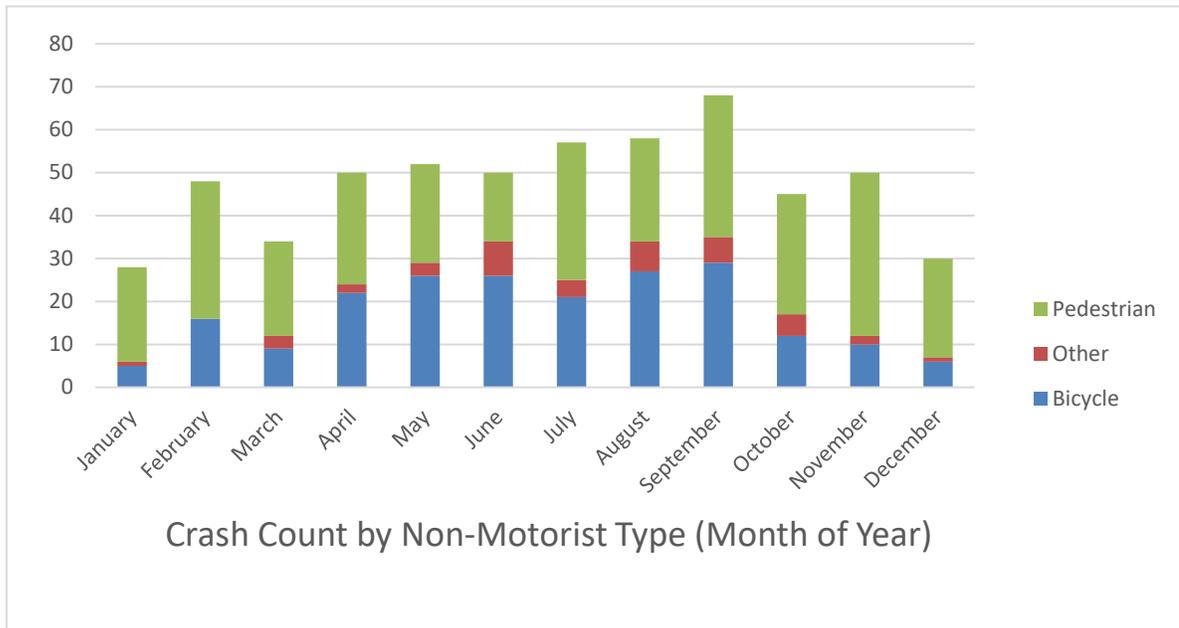


Figure 10.5 - Number of Bicyclist and Pedestrian Crashes (Month of Year)

TIME OF THE DAY

The crash data shows some peaking in the morning and evening commute periods, as well as a small spike in the evening hours, where visibility may be an issue (Figure 10.5).

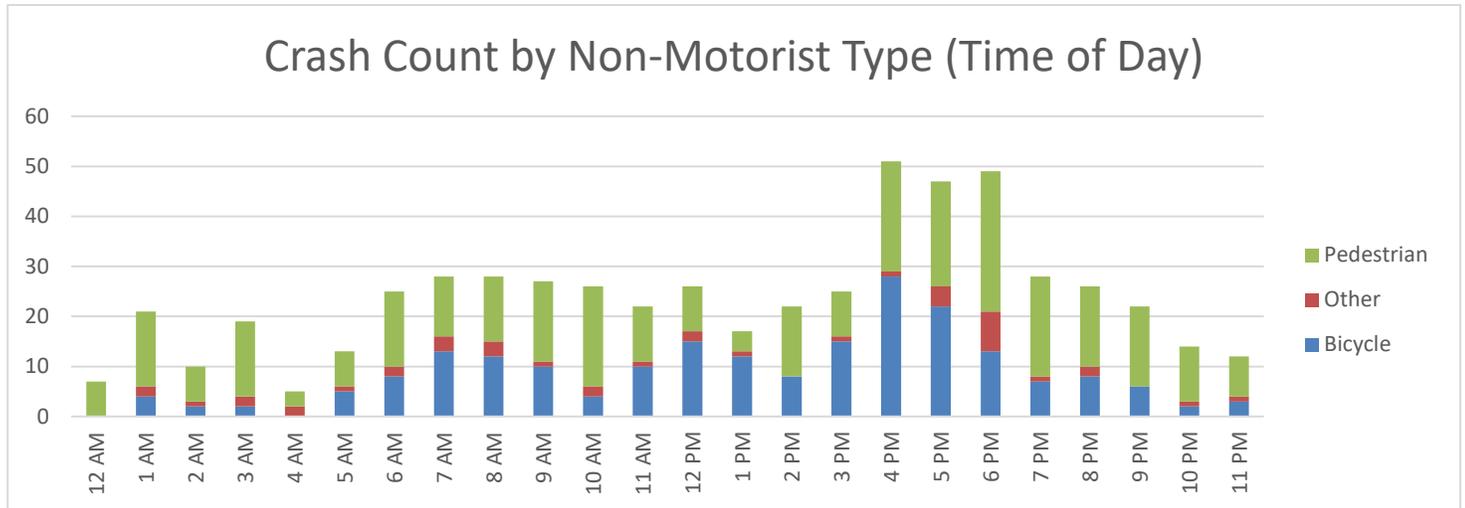


Figure 10.6 - Number of Bicyclist and Pedestrian Crashes (Time of Day)

PEDESTRIAN/BICYCLIST ACTION

In the Arkansas State Police database the action/location field indicates the action of the pedestrian and bicyclist involved in crashes. In Figure 10.6 a response of ‘other’ or ‘N/A’ was provided for 28 percent of pedestrian crashes and 18 percent of bicycle crashes. Regular trainings with police officers could result in a higher response rate to this category for both bicyclist- and pedestrian-involved crashes.

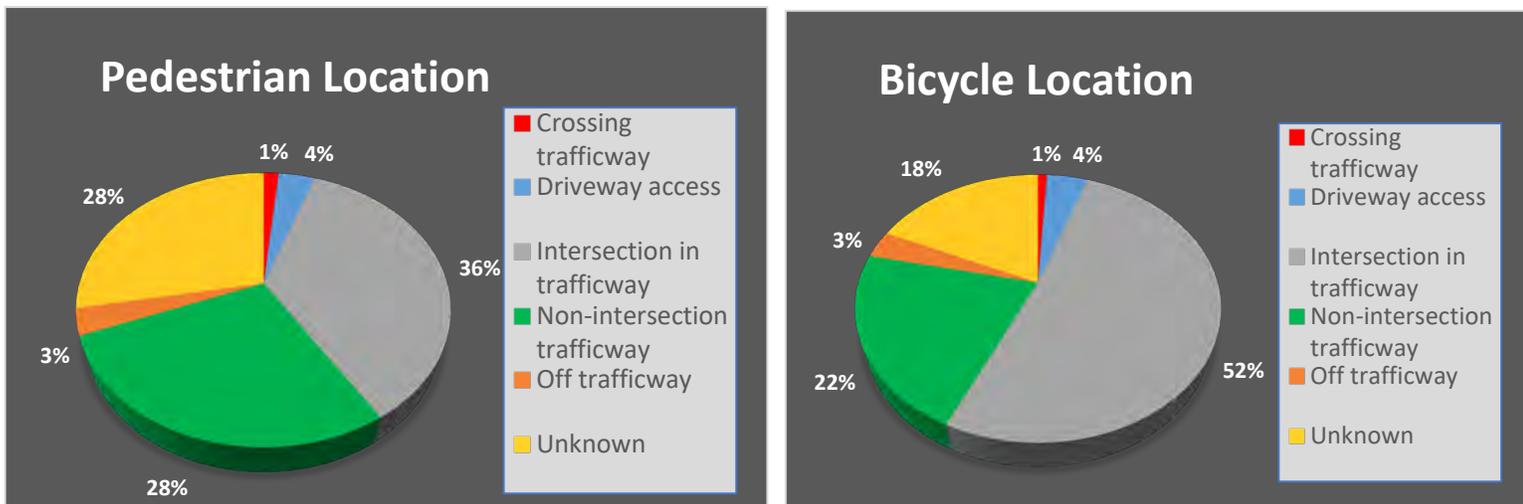


Figure 10.7 - Bicycle and Pedestrian Actions

MOTORIST ACTION/NON-MOTORIST INVOLVED CRASH

Per AR State Police Crash Data: 46% of all Motor Vehicle Drivers, involved in crashes with a Non-Motorist, had no contributing action. The pie chart depicts the percentage of contributing factors (the remaining 54%) with a breakdown of contributing factors.

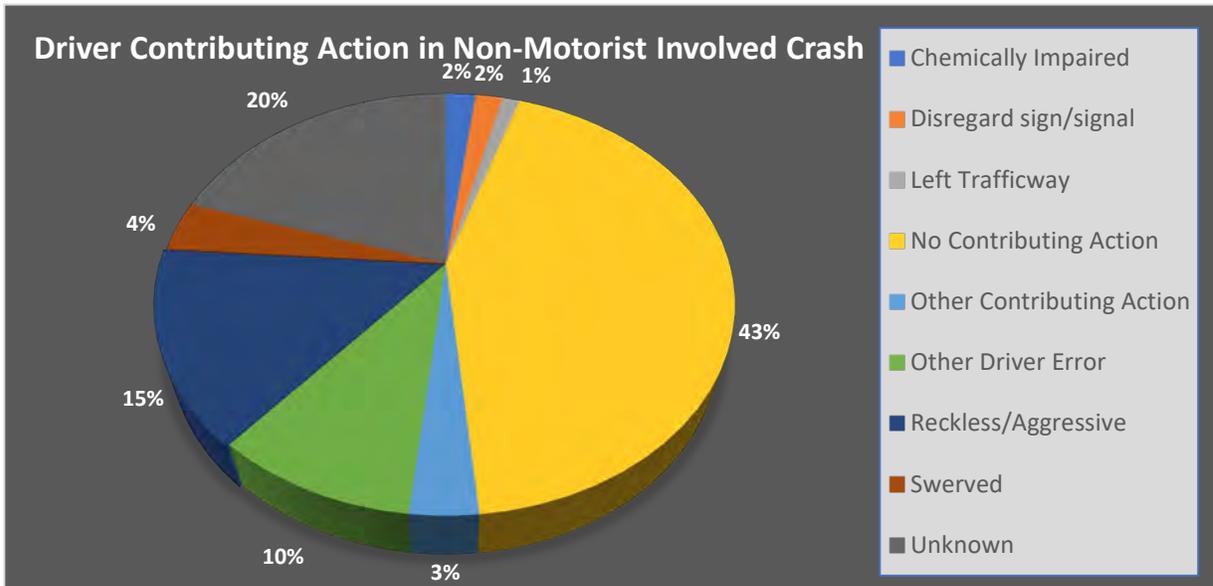


FIGURE 10.8 - Number and Severity of Bicyclist and Pedestrian Crashes (2015-2019)

OPPORTUNITIES FOR IMPROVED CRASH DATA

The crash data provides only limited information to understand the nature of crashes involving pedestrians and bicyclists. NWARPC is striving to improve data by working with local jurisdictions reporting the data to the State Police. In 2015 this was done by holding a summit for law enforcement individuals and discussing crash data. Crash numbers with unknown has decreased.

BIKE/SCOOTER SHARE NWA

The City of Fayetteville, the University of Arkansas and Experience Fayetteville implemented a bike share program in 2018 with VeoRide’s dockless bike share system, works through a mobile app and website. Users are able to reserve, unlock and lock available bikes at designated areas throughout the city. E-bikes were soon added to the fleet in 2019 and scooters in 2020. The first year had 85,000 rides. Due to damage, vandalism wear and tear the bike fleet was shrunk from 440 to 100. E-scooters launched in November 2019 and has grown from 250 to 1,000 scooters city-wide. Fayetteville is seeing approximately 50,000 e-scooter rides each month.



VeoRide Bikes at University of Arkansas

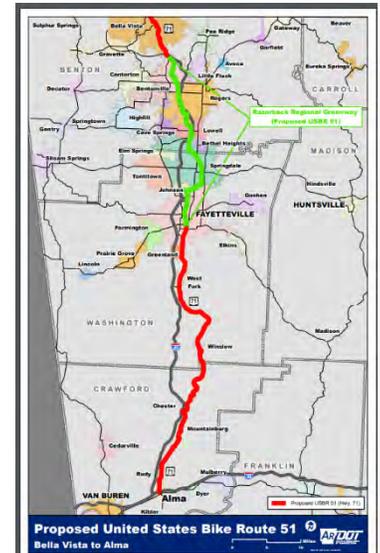
More information can be found at <https://www.fayetteville-ar.gov/3489/VeoRide-Bike-Share>.

US BIKE ROUTE 51

NWARPC worked with ARDOT, MODOT, local government entities and advocacy groups on creating and adopting USBR51 routes through Benton and Washington Counties in Arkansas and McDonald County Missouri. On December 4, 2019, the RPC/Policy Committee adopted Resolution 2019-08 designating the preferred route.

In the Arkansas Bicycle and Pedestrian Plan information regarding US Bike Routes can be found. It describes in 2009, the American Association of State Highway and Transportation Officials published a National Corridor Plan (NCP) map for the United States Bicycle Route System, see Figure 2. This plan identifies three priority U.S. Bicycle Route corridors (US BR 45, 51, 80 and 84) and four alternate route corridors through Arkansas.³ Inclusion in the National Corridor Plan does not constitute designation. Rather, the NCP provides each state a framework that sets the stage for local planning that takes place at the state or regional level. States are encouraged to conduct further study and propose specific routes for formal designation and signage. It is understood that corridors may be added, or existing corridors shifted based upon the findings of state led route studies and interstate coordination efforts. As specific routes are designated the route numbering system is augmented or modified as needed. In addition to routes 45, 51, 80, and 84, the process for the State Plan has already identified an additional route suitable for further study--a diagonal link between the Southern Tier Route (US BR 90) and the TransAmerica Trail (US BR 76).

- TIER 1 - U.S. Bicycle Routes
- TIER 2 - Arkansas State Bicycle Routes
- TIER 3 - Shared-Use Paths of Regional and Statewide Significance
- TIER 4 - Bicycle Hub Communities and Mountain Bicycling Venues



Preliminary Statewide Bikeway Network



ARKANSAS HIGH COUNTRY ROUTE - 1171.8 Mile Trail

The Arkansas High Country Route was made possible through the generous support of the Arkansas Parks and Recreation Foundation, with additional support from Adventure Cycling members and the communities it travels through. The Arkansas High Country Route has it all in its 1171.8 miles. According to local route designer Chuck Campbell, “That route don’t go nowhere — It just runs around everywhere!” Indeed, this route is designed to connect many of the interesting places in west-central and northwest Arkansas. The route is comprised of three large adjacent loops: the South Loop, the Central Loop, and the Northwest Loop. The South Loop, on map section 1, begins and ends in Little Rock. The Northwest and Central Loops, on map section 2, begin and end in Bentonville and Russellville, respectively. Routing is approximately 50% gravel and 50% pavement and climbs/descents can reach gradients between 17-21%. More information and maps can be found at <https://www.adventurecycling.org/routes-and-maps/adventure-cycling-route-network/arkansas-high-country-route/>



BIKE PARKS

There are several bike parks and pump tracks in NWA.

[Metfield Skills Park](#)

Commonwealth Rd., Bella Vista, AR 72714

Info: Kid-friendly outdoor pump track and skills area. Includes wooden features and a paved trail.

[Blowing Springs Park – Mtb Trails & Pump Track](#)

700 Blowing Spring Rd, Bella Vista, AR 72714

Info: 4 miles single track. While the trail is rated moderate, riders can still find a challenge with rock drops. Roll up and over challenging rocks and shred down flowing trails.

[8th Street Gateway Park](#)

SE 8th Street, Bentonville, AR 72712

Info: New skills course lovingly called “Mama Bear” is perfect for riders of all levels.

[Bentonville Bike Playground](#)

N Walton Blvd., Bentonville, AR 72712

Info: 1 acre bike playground includes tunnels, bridges, and a pump track to help riders develop their cycling skills

[Thaden School Pump Track and Skills Course](#)

891 SE C St, Bentonville, AR 72712

Info: Asphalt Velosolutions pump track; first of its kind at a school in the United States. Newly added dirt track with wooden features, suitable for balance bikers to skilled riders.

[Wolf Creek Park](#)

South Bright Ave, Bentonville, AR 72712

Info: Cub Trail – Great flow trail for beginners. Small rollers, tabletops, and berms. Short loop that you can ride over and over. Wolf Trail is longer, but still suitable for confident balance bikers.

[Lake Fayetteville Bike Park](#)

1208 E. Lake Fayetteville Road, Fayetteville AR

Info: Skills course, groomed berms, natural trails, and paved trails

[Gregory Park Bike Park](#)

69 E. Sycamore Street, Fayetteville, AR

Info: Gregory Park has a concrete pump track, a bicycle skills course, and two one-direction natural-surface downhill mountain-bike trails. These trails are open to the public, and are also used as a practice course for regional school teams participating in the National Interscholastic Cycling Association mountain-biking program for student athletes.

[The Railyard Bike Park](#)

299 East Cherry Street, Rogers, AR

Info: Natural surface bike park with various elements allowing riders of any skill level to enjoy the park

[City Lake Park](#)

Lake Road, Siloam Springs, AR

Info: Flow trails, skills course, and pump track

[Runway Bike Park](#)

922 East Emma Ave, Springdale, AR 72764

Info: Pump track (largest asphalt track in North America), skills course, and bicycle playground



Runway Bike Park



The Railyard Bike Park



Bicycle Playground Springdale



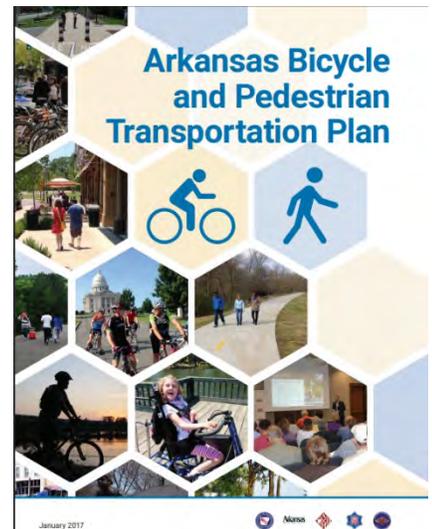
Pineville Bike Park

ARKANSAS DEPARTMENT OF TRANSPORTATION

The Arkansas State Highway and Transportation Department adopted the Arkansas Bicycle and Pedestrian Transportation Plan in January 2017. The website for the State Bike Ped Plan is <http://www.arkansasbikepedplan.com>.

CURRENT ARDOT BICYCLE FACILITY ACCOMMODATION POLICY – JUNE 27, 2005

1. Accommodation of bicycles will be given due consideration when a proposed highway project is on a route that has been designated as a bicycle route by a locally adopted bicycle plan or master street plan and the Department concurs that the route should be a designated bicycle route. Coordination with local jurisdictions may be necessary to determine the recommended accommodations.
2. Bicycle accommodations on routes that have not been designated as bicycle routes by a locally adopted bicycle plan or a master street plan will be considered if the local jurisdiction will provide the required additional funds.
3. When bicycle accommodations are to be made on routes with an open shoulder section, the paved shoulder will be used to accommodate bicycles. Shoulder widths shall conform to the widths recommended in the American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets" 6th Edition, 2011.
4. When bicycle accommodations are to be made on routes with a curb and gutter section, the bicycle lane will be in accordance with recommendations in the AASHTO Guide for the Development of Bicycle Facilities. Generally, a bicycle lane width of 4 feet (measured from the lane edge to the edge of the gutter) will be considered.
5. If local or regional design standards specify bicycle facility widths greater than the standards noted above, the additional right-of-way and construction costs associated with the greater width shall be funded by the local jurisdiction that adopted the higher design standards.
6. Shared use paths (joint pedestrian/bicycle facilities separated from the roadway) are used primarily for recreational purposes, and as such will not normally be considered for bicycle accommodation on the state highway system. Exceptions will be considered when the local jurisdiction specifically requests the shared use path. In such cases, the minimum shared use path width shall be 10 feet and the local jurisdiction shall bear any additional right-of-way and construction costs required for the shared use path and shall assume all future maintenance of the facility.



AHTD SIDEWALK POLICY

1. When curb and gutter sections are proposed along a highway with existing sidewalks, the sidewalks will be replaced in accordance with this policy.
2. When curb and gutter sections are proposed along a highway with no existing sidewalks, sidewalks will be constructed on both sides of the roadway in developed areas. In undeveloped areas, sidewalks will be considered on one side of the roadway unless evidence of pedestrian traffic warrants sidewalks on both sides of the roadway.
3. All sidewalk construction will conform to the latest edition of the Americans with Disabilities Act Accessibility Guidelines (ADAAG).
4. The minimum sidewalk width will be five feet, and the minimum offset from the back of the curb to the sidewalk edge will be three feet. No obstructions (mailboxes, signs, etc.) will be allowed in the sidewalk. The minimum vertical clearance to the bottom of any obstruction overhanging the sidewalk will be 80 inches.
5. If local or regional design standards specify pedestrian facility widths greater than the standards shown above, the additional right-of-way and construction costs associated with the greater width will normally be funded by the local jurisdiction that adopted the higher design standards.

The AHTD Sidewalk Policy can be found at: https://www.arkansashighways.com/planning_research/statewide_planning/bicycle_pedestrian_planning/AR%20bike%20ped%20policy.pdf

The NWARPC and several area cities made a formal comment on the State Plan requesting the State to reevaluate the AHTD Bicycle and Pedestrian Policy beginning in early 2016.

ADVOCACY

BikeNWA

BikeNWA is a local non-profit bike advocacy group with a mission is to educate, inspire, and activate the Northwest Arkansas community to support creation of a world-class network of recreational and active transportation infrastructure for all ages and abilities. Our vision is a safe, easy, and convenient multi-modal network that connects where people live, work, and play. We focus on initiatives that promote advocacy and education in cities across Northwest Arkansas with a particular focus on communities along the Razorback Greenway corridor.

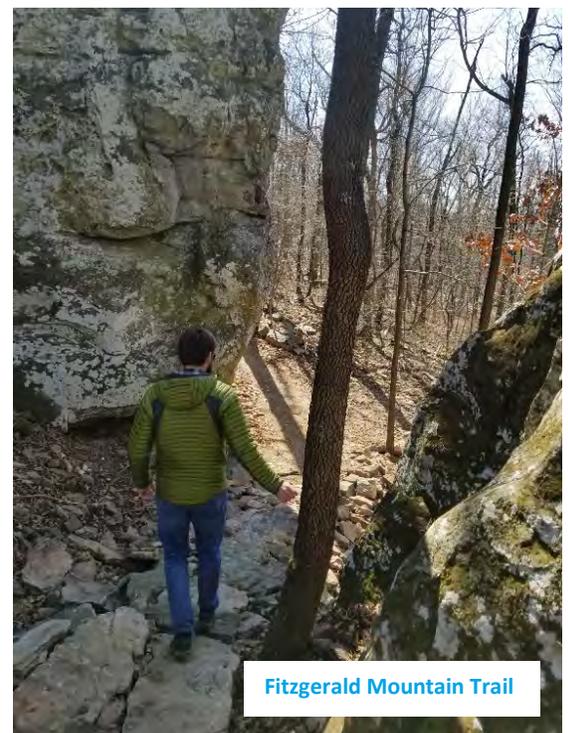
BikeNWA works tirelessly working with local organizations, cities, NWARPC, and the State to promote bicycling in NWA and in Arkansas.

- Education programs in many Benton and Washington County elementary schools.
- Slow Streets NWA Program
- Ride Smart Ride Safe Campaign
- Citizen Advocacy Committees
- Mobility Leadership Classes
- Assist Bicycle Friendly Business Program
- Bike/Ped Infrastructure Pilot Projects 2018-2019

NWA TRAILBLAZERS

NWA Trailblazers is a non-profit organization that continues to help our community by developing multi-use trails for cycling, running, walking and most importantly, discovering the beauty found across NW Arkansas.

For almost two decades we have been committed to building quality trails within a speedy time frame. We are community driven with the main goal to help NW Arkansas step outside and discover more. Our mission is developing cycling and pedestrian infrastructure that connects community and moves people. NWA Trailblazers has completed 45 projects and built 150 miles of trail with 20 trails being worked on currently.



PeopleForBikes

Since 1999, PeopleForBikes has created a prominent place for bikes in transportation, mobility, and recreation decisions at all levels of government. We ensure bikes are prioritized and positioned as a real solution to improve Americans' health, connect communities, boost local and state economies, strengthen our nation, and protect our planet. Together, we work with federal, state, and local officials to make biking better for everyone. PeopleForBikes' mission is to get more people riding bikes more often, and to make bike riding better for everyone. Three pillars support our work toward those ends:

"Northwest Arkansas cities continue to benefit from the investments made by organizations committed to making cycling safe, accessible and convenient. The investment in bike infrastructure, education, bike culture, volunteer and community capacity building are truly world class. All of this hard work, volunteer support, and investment manifests itself in a healthier and happier community that really benefits from and embraces all things bikes." Jenn Dice COO, PeopleforBikes

1. EMPOWER CITIES TO TAKE ACTION: PeopleforBikes inspires and empowers cities to take actions that get more people on bikes to promote healthier populations and a more livable planet.
2. CREATE CONNECTIONS: We leverage technology, infrastructure, and content to make biking safer, easier to access, and more fun by encouraging diversity.
3. SUPPORT THE BIKE INDUSTRY: We advance pro-bike business policies to support a thriving bike industry and the jobs it produces.

PeopleforBikes has partnered with NWARPC and others to encourage riding and infrastructure development.

PeopleForBikes - NWA BIKE BUSINESS INNOVATION TEAM

The Northwest Arkansas Bike Business Innovation program is a five-year partnership between PeopleForBikes and the Walton Family Foundation to increase the number of employees who bike to and from workplaces in Benton County. Through it, PeopleForBikes brings staffing, programming, and technology tools to support the community in achieving convenient, social, and seamless bicycle commute experiences for Benton County employees. A key program component is Ride Spot, an industry-leading online and mobile platform that rewards people for riding and helps them find safe bicycle routes, track rides, and share their ride experiences.

The goals of the program are centered around supporting regional employers with expertise, technology, programming, and incentives to:

- Grow the number of employees who ride bikes to and from work by 2025.
- Become national leaders in embedding bicycling into the workplace culture.
- Realize the return on investment from an active workforce that embraces bicycling, both for transportation and recreation.
- Position Northwest Arkansas as the national model for getting more people riding bikes.
- Realize the benefits of bicycling as a whole to create a better, healthier community.

Through this data-driven program, Northwest Arkansas will be an incubator for best practices in incentivizing biking at the company level. Participating businesses will be at the forefront of employers investing in healthier workplaces and communities through the lens of biking. The Team will track progress through metrics including employee wellness and productivity, recruiting and retention, and reduced healthcare spending.

ECONOMICS

TOURISM

The Walton Family Foundation reports that cycling – be it road, trail, gravel or shared use path — delivered \$137 million in economic benefits to Northwest Arkansas in 2017 and over a span of 12 months beginning in the spring of 2017, more than 90,000 “mountain biking tourists” visited the area, 57 percent of them from out of state. That’s on par with “blueblood” trail destinations like Colorado and British Columbia.

And in 2018, out-of-state biking tourists provided a \$27 million economic boost to NWA. Another WFF study found that between 2015 and 2017, average weekday ridership volumes among NWA residents increased roughly 32 percent to 187 riders and by 14 percent to 336 cyclists on weekends per study site. Annual volumes per study site increased 24 percent to 83,700 riders. **by [Mark Carter](#)**

<https://armoneyandpolitics.com/enjoying-the-ride-biking-a-boost-for-quality-of-life-tourism-in-arkansas/>

ECONOMIC AND HEALTH BENEFITS OF BICYCLE IN NWA – BBC RESEARCH & CONSULTING

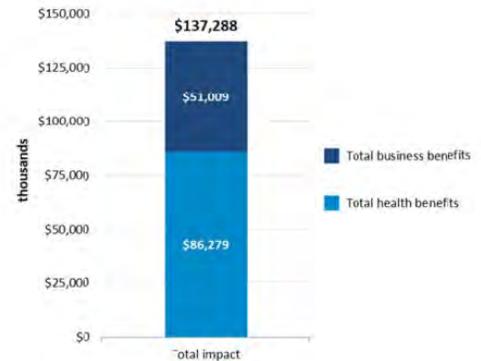
To better understand the economic and health benefits of bicycling in Northwest Arkansas, the Walton Family Foundation, in collaboration with PeopleForBikes and BikeNWA, commissioned BBC Research & Consulting (BBC) to conduct a study of bicycling behavior and assess the economic and health benefits of bicycling in the region.

ECONOMIC BENEFITS

The total economic benefits of bicycling for Northwest Arkansas are approximately \$137 million. As shown in Figure 1, approximately \$51 million (37%) of total economic benefits are business benefits and approximately \$86 million (63%) are health benefits. Each of those estimates is described in greater detail below.

Figure 1.
Total benefits of bicycling in Northwest Arkansas

Source:
BBC Research & Consulting Economic Benefits Model 2017.



BUSINESS BENEFITS

Bicycling benefits business in a variety of ways in NWA. BBC examine the benefits of in-region household and resident spending on bicycling equipment, goods, and events; bicycle retail sales to out-of-region visitors; the retail sales tax impact of local bicyclists on no-bicycle related business; and bicycle tourism.

Figure 2.
Estimates of the economic benefits of bicycling (in \$ thousands)

Source:
BBC Research & Consulting Economic Benefits Model 2017.



HEALTH BENEFITS

Bicycling in Northwest Arkansas keeps children and adults active and decreases the prevalence of adverse health conditions such as heart disease, diabetes, and other chronic health conditions. Figure 7 presents the total health benefits of bicycling in NWA. Bicycling contributes an estimated \$86 million in total health benefits to the local economy, including \$79 million in reduced mortality benefits identifies using the World Health Organization’s (WHO’s) Health Economic Assessment Tool (HEAT) model and \$7 million dollars in estimated avoided health care costs.

Figure 7. Estimates of the health benefits of bicycling (in \$ thousands)

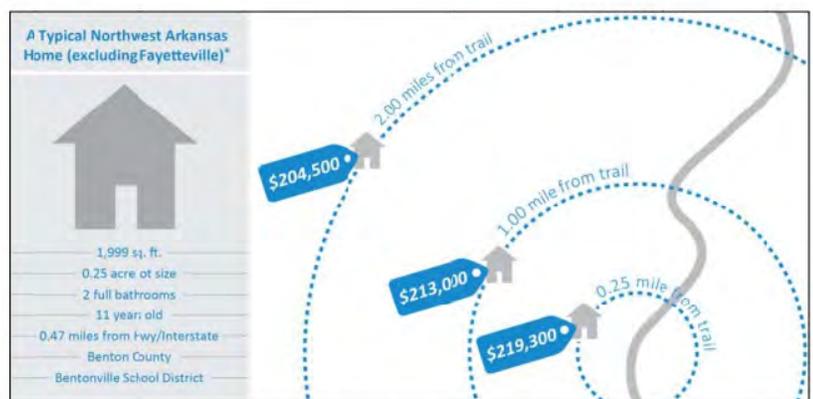
Source: BBC Research & Consulting 2017.



PROPERTY VALUES

BBC determined that a home’s proximity to shared-use paved trails is associated with an increase in its sale price in Northwest Arkansas. Property parcel and sale price information was collected from the Northwest Arkansas Regional Planning Commission and the Washington and Benton County Assessors’ Offices. BBC used the property parcel information to model the relationship between distance from shared-use paved trails and home sale prices in the region for single-family homes within three miles of a shared-use paved trail, excluding homes sold in Fayetteville. BBC excluded homes sold in Fayetteville because of data limitations unique to that city. Partly as a result of its large student population, Fayetteville has a high share of rental properties and multi-family housing units, which are not captured in the data available to the research team. Fayetteville trails have been placed with density in mind, thereby favoring areas with multi-unit dwellings, rental properties, and student populations. Consequently, a majority of the single-family homes within three miles of Fayetteville’s shared-use paved trails were of highly variable value compared to higher priced neighborhoods. Figure 3 presents the model for home sale price of the typical Northwest Arkansas home at different distances to trail facilities, excluding homes sold in Fayetteville. The model suggests there is an increase in the sale price premium that accompanies living close to shared-use paved trails.4 A typical home a quarter mile from a shared-use paved trail sells for \$6,300 more than a home one mile from a shared-use paved trail and \$14,800 more than a home two miles from a shared-use paved trail.

Figure 3. Northwest Arkansas Property Value Hedonic Regression: Effect of Distance from Shared-use Paved Trail



Note: *Profile of a median home based on 20,493 home sales that took place in Benton and Washington Counties between January 2012 and October 2017. This profile excludes homes that are over 3 miles from a shared-use paved trail and homes that were located in Fayetteville.
Source: BBC Research & Consulting.

This report also has survey results from the participants and city comparisons that are beneficial in understanding and planning for bicycle and pedestrian activities in the region. The report can be found at:

FUNDING

A variety of funding sources are available for bicycle and pedestrian facilities. Bicycle and pedestrian projects are broadly eligible for funding from almost all the major Federal-aid highway, transit, safety, and other programs. Bicycle projects must be “principally for transportation, rather than recreation, purposes” and must be designed and located pursuant to the transportation plans required of states and MPOs.

FEDERAL-AID HIGHWAY PROGRAMS

Surface Transportation Block Grant Program (STBGP)

The Surface Transportation Program provides flexible funding that may be used by states and local jurisdictions for projects on roads, bridges and transit. STBGP funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects related to safe bicycle use and walking.

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) funds safety projects aimed at reducing traffic fatalities and serious injuries. Bike and pedestrian safety projects are eligible for HSIP funding. All public roads – including State, borough and local roads – are eligible for HSIP funding.

Recreational Trails Program (RTP)

Recreational Trails Program (RTP) funds may be used for all kinds of trail projects. Of the funds apportioned to a state, 30 percent must be used for motorized trail uses, 30 percent for non-motorized trail uses, and 40 percent for diverse trail uses (any combination).

Transportation Alternatives Program (TAP)

MAP-21/FAST Act combined previous biking and walking funding programs into the Transportation Alternatives Program. TAP funding is divided up into two amounts distributed by AHTD and by NWARPC through a competitive grant process.

In 2012, the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) designated the Fayetteville-Springdale-Rogers, AR-MO urbanized area as Transportation Management Area (TMA). This TMA designation provides Transportation Alternatives Program funds to the Northwest Arkansas Regional Planning Commission (NWARPC) based on the 2010 Census Bureau urbanized area population of 295,083. Under current MAP-21/FAST Act legislation, TAP funds can be utilized for all eligible transportation alternatives projects at the discretion of the Metropolitan Planning Organization (MPO), which is the RPC/Policy Committee (NWARPC). NWARPC receives approximately \$500,000 in TAP funds annually.

A goal of the 2045 MTP is to develop a more comprehensive bicycle and pedestrian network and expand the Heritage Trail system. This regional trail and route system would link the emerging master trail plans of the region’s cities and include strategic spurs to connect employment centers, schools, retail shopping, recreational sites, parks, historic sites, and museums.

The 2045 MTP recommends maintaining a regional commitment to bicycle and pedestrian facilities, as well as encouraging cities to develop master trail plans in conjunction with the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan. The TAP selection criterion includes the following categories:

- Razorback Greenway Connections
- Northwest Arkansas Regional Bicycle and Pedestrian Master Plan & The Heritage Trail Plan
- Local Bicycle and Pedestrian or Comprehensive Plan
- Connectivity
- Safety
- Barriers to Mobility

Projects Funded by NWARPC STBGP TAP Grant Funds:

Year	County	Job No.	Jurisdiction	Project	TAP-FEDERAL
2013	Washington	040603	Fayetteville	Town Branch Trail Job # 040603	\$ 358,502
2013	Benton	090396	Rogers	Mercy Phase II Restroom	\$ 120,000
2014	Benton	090416	Bentonville	Walton Blvd Trail Construction Project	\$ 254,199
2015	Benton	090439	Rogers	New Hope Bicycle and Pedestrian Bridge	\$ 220,199
2016	Benton	090439	Rogers	New Hope Bicycle and Pedestrian Bridge	\$ 225,000
2016	Washington	040715	Springdale	Deans Trail Ph. 1	\$ 265,435
2017	Washington	040715	Springdale	Deans Trail Ph. 1	\$ 241,310
2018	Washington	040xxx	Fayetteville	Cato Springs Trail Lighting	\$ 320,000
2018	Benton	090xxx	Siloam Springs	E. Main St Trail Ext	\$ 118,000
2019	Benton	090479	Bentonville	McCollum Rd Side path	\$ 160,000
2019	Benton	090494	Lowell	KJMP Trailhead/Connector Trail	\$ 90,000
2019	Benton	090486	Gravette	Trail System	\$ 81,041
2019	Benton	090xxx	Siloam Springs	Hico Trail from Wash. St to Cheri Whitlock Pkwy	\$ 250,000
2019	Benton	090338	Rogers	Walnut Street/US 71B BB0903 Sidewalks	\$ 212,047
2020	Benton	090xxx	Centerton	McKissic Creek Trail	\$ 250,000
2020	Washington	040xxx	Springdale	Spring Creek Trail	\$ 250,000
2021	Benton	090xxx	Siloam Springs	Lake Francis/Washington St. Sidewalks	\$ 125,000
2021	Washington	040xxx	Springdale	Watkins Ave. Bike-Ped Bridge over I-49	\$ 125,000
2021	Benton	090xxx	Bentonville	Razorback Greenway Relocation - I-49 SPUI CA	\$ 250,000
					\$ 3,915,733

Table 10.9 – NWARPC STBGP TAP Projects



New Hope Bridge, Razorback Greenway, Rogers

Projects Funded by NWARPC STBGP-A Funds that Include Active Transportation Facilities:

Year	County	Job No.	Jurisdiction	Project
2013	Washington	040581	Fayetteville	Hwy 112 (Razorback Rd) - Hwy 180 (6th St) to Leroy Pond
2014	Washington	040680	Springdale-Johnson	56th Street Ext. (Don Tyson to Johnson Mill)
2014	Washington	BB0413	Springdale	Elm Springs Rd. Intchnng. Imprvts. AHTD Job BB0413
2014	Washington	040582	Fayetteville	Hwy112 - Maple Street Impvts. and Traffic Signal-Maple/Razorback
2015	Benton	090447	Rogers	Dixieland Road and A&M Railroad
2016	Benton/Wash	012007	Springdale-Bethel Heights	ARDOT Hwy 265 Randall Wobbe - Hwy 264 Job 012007
2016	Washington	040717	Springdale	Don Tyson Parkway Ext. (S. 56th St. to Hwy. 112)
2016	Benton	090338	Rogers	Walnut Street/US 71B (Dixieland Rd to 8th St.)
2017	Benton	090473	Bentonville	SW I St. and Hwy. 102 Intersection
2018	Washington	040657	Fayetteville	Rupple Rd. (Wedington Drive to Starry Night)
2019	Benton	090392	Rogers	28th Place Phase 1 (Pleasant Grove to Greens/Blossom Way)
2019	Washington	040xxx	Fayetteville-Washington	Highway 112/Howard Nickell Road Intersection Improvements
2019	Benton	090471	Centerton	Hwy 102B/Seba Rd. Intersection Improvements
2020	Benton	090393	Rogers	JB Hunt Road (Pauline Whitaker Park to Bellview Rd)
2020	Benton	090417	Lowell	S. Dixieland Road Extension
2021	Washington	040680	Springdale	Gene George Blvd (Don Tyson to 1000 ft. South)
2021	Benton	090xxx	Bentonville-Centerton	Greenhouse Road Improvements
2021	Washington	040683	Farmington	Hwy 170 (Hwy. 62 to Clyde Carnes Road)
2021	Benton	090436	Bella Vista	Mercy Way Bridge and Road Imps - Razorback Greenway Ext.
2021	Washington	040688	Fayetteville	Sain Street Ext. (N. Front St. to Vantage Blvd.)

Table 10.10 – NWARPC STBGP-A PROJECTS INCLUDING ACTIVE TRANSPORTATION FACILITIES ESTIMATE \$5M



ARKANSAS DEPARTMENT OF TRANSPORTATION GRANT AWARDS

The Arkansas Department of Transportation approved more than \$20 million in funding to applicants for Transportation Alternatives Program (TAP), Safe Routes to School (SRTS) Program, and Recreational Trails Program (RTP) projects in Arkansas. Northwest Arkansas communities received funding for the following projects from 2016-2020.

Year	County	Job No.	Jurisdiction	Project	FEDERAL
2016	Benton	090495	Avoca	Avoca Heritage Trail (TAP-16) (S)	\$160,000
2016	Benton	090479	Bentonville	Bentonville McCollum Rd. Sidepath (TAP-16) (S)	\$480,000
2016	Benton	090476	Bentonville	Bentonville Razorback Greenway Impvts. (TAP-16) (S)	\$500,000
2016	Benton	090485	Centerton	Centerton SRTS (TAP-16) (S)	\$263,000
2016	Benton	090494	Lowell	Lowell Greenway Connector Trail (TAP-16) (S)	\$302,000
2017	Benton	090494	Lowell	Lowell Greenway Connector Trail (TAP-16) (S)	\$485,000
2017	Washington	BB0411	Fayetteville	Hwy. 16-112 Spur Intchg. Impvts. (F)	\$332,000
2017	Washington	040754	Prairie Grove	Muddy Fork Park Walking Trail (Prairie Grove) (TAP-17) (S)	\$140,000
2017	Washington	040755	West Fork	West Fork Safe Routes Connection (TAP-17) (S)	\$181,000
2018	Benton	090570	Decatur	Decatur Veteran's Park Trail Impvts. (RTP-18) (S)	\$250,000
2018	Washington	040797	Fayetteville	Fayetteville Razorback Greenway Tunnel Impvts. (RTP-18) (S)	\$88,000
2018	Benton	090571	Gentry	Gentry Flint Creek Bridge & Trail Impvts. (RTP-18) (S)	\$121,000
2018	Washington	040783	AR Dept of Parks and Tourism	ADPT Devil's Den Trail Impvts. (TAP-18) (S)	\$255,000
2018	Benton	090565	Siloam Springs	Siloam Springs N. Hico St. Ped. Impvts. (TAP-18) (S)	\$155,000
2018	Washington	040786	Springdale	Springdale Dean's Trail Ph. 2 (TAP-18) (S)	\$500,000
2019	Benton		City of Bella Vista	Mercy Way Corridor Improvements (TAP)	\$340,000
2019	Benton		City of Gentry	South Smith Avenue Sidewalks (TAP)	\$39,000
2019	Benton		City of Rogers	Safe Routes to Schools Right-of-Way Improvements (TAP)	\$340,000
2019	Washington		City of Springdale	Dean's Trail Phase 3 (TAP)	\$500,000
2020	Benton		City of Bentonville	Trail at I_49/Hwy549 Interchange (TAP)	\$500,000
2020	Benton		City of Rogers	Hudson Road Pedestrian Improvements (TAP)	\$250,000
2020	Washington		AR Dept of Parks, Heritage and Tourism	Devils Den Shared-Use Pathway & CCC Bridge Phase 2 (TAP)	\$189,000
2020	Washington		City of Springdale	Watkins Avenue Pedestrian/Bicycle Crossing I-49 (TAP)	\$250,000
2019	Washington		City of Fayetteville	Wilson Park Trail Bridge Replacement (TAP)	\$170,000
2019	Benton		City of Sulphur Springs	Sulphur Springs Park Trail (RTP)	\$21,000
2020	Washington		City of Fayetteville	Lake Fayetteville Razorback Greenway Improvements (RTP)	\$150,000

Table 10.11 – ARDOT Grants - 2016-2020

\$6,961,000

BICYCLE AND PEDESTRIAN FACILITY TYPES

Bicycle and pedestrian facility types are very important in the design and implementation of an active transportation network. The region has made a commitment to implementing bicycle and pedestrian facilities for a world-class active transportation network. This includes implementation of active transportation facilities that consider all ages and all abilities and user design profiles.

The region is committed to building facilities that will be safe, comfortable, and equitable. This includes implementing access management and the use of Separated Bike Lanes or Shared Use Path/Sidepaths based on FHWA Bicycle Selection Guide and the AASHTO Guide for the Development of Bicycle Facilities. [FHWA Bikeway Selection Guide](#)

In 2019, the region participated in training from the Federal Highway Administration on the FHWA Bikeway Selection Guide. The region has also been certified in National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide standards and trained on the use of American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities and Manual on Uniform Traffic Control Devices (MUTCD).

Bicycle accommodation on expanded and/or new location roadways will be determined by using these national guidelines and standards. Signage and pavement markings will follow the Manual on Uniform Traffic Control Devices (MUTCD).

NWARPC and its planning partners continue to work hard to set standards for consistency throughout the network and region including the most recent development of cross sections and detour accommodations on the Razorback Greenway. Chapter 9 describes the facility design for complete streets and access management with bicycle and pedestrian facilities that sets the standard for the region including a shared use path/sidepath along arterial roads and roads with high volumes and high speeds.

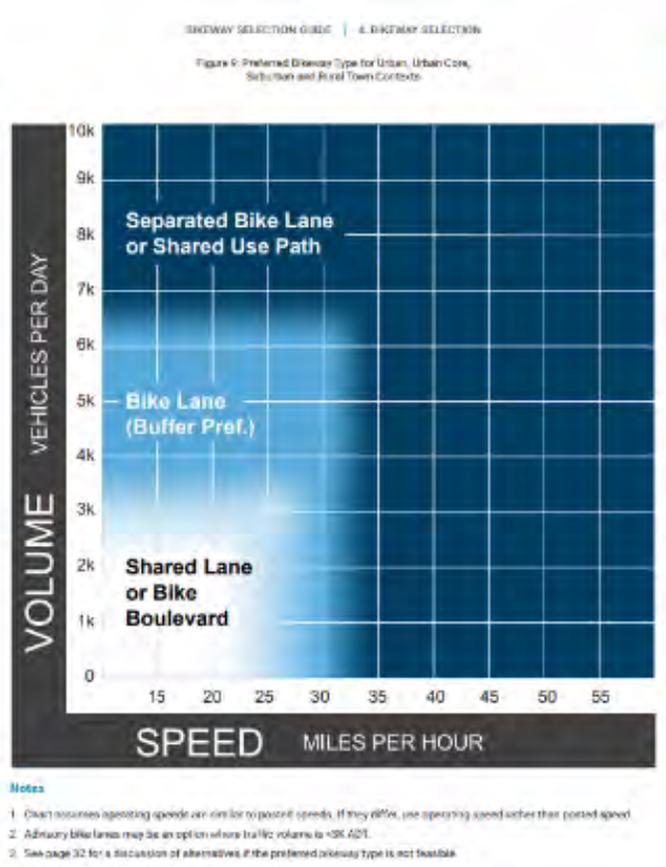


Figure 10.9 – FHWA Bikeway Selection Guide

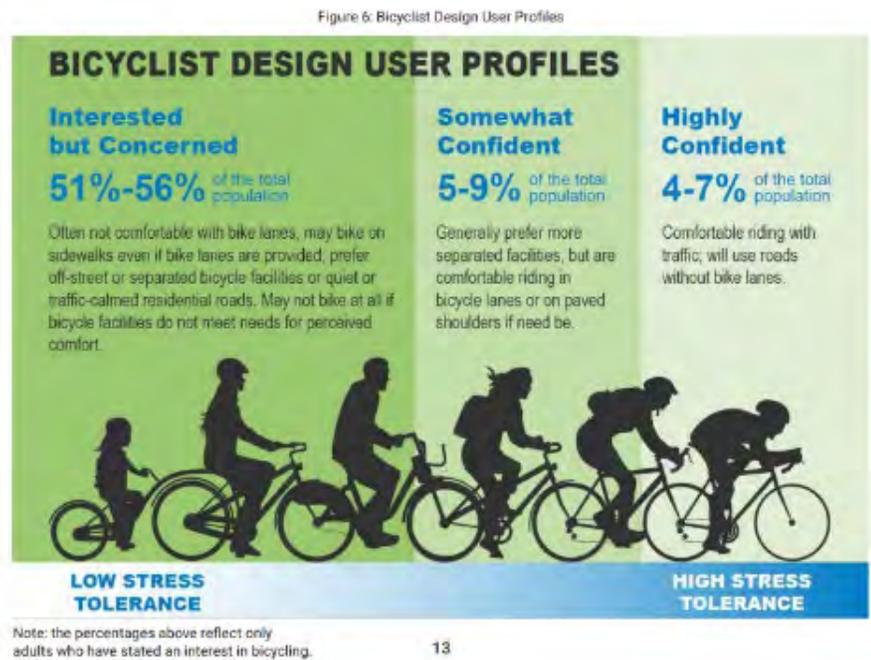


Figure 10.10 – FHWA Bikeway Selection Guide



CHAPTER 11. PUBLIC TRANSPORTATION

INTRODUCTION

Public Transportation is an important transportation mode within the region. Public and private transit systems and facilities make the region more accessible. This includes the young, elderly, disabled, low-income and all others without means of personal transportation, or simply those who do not wish to drive a private vehicle and desire public transportation as a choice. Transit can serve more people while causing less environmental impact and traffic congestion. Transit reduces dependence upon the automobile, reduces overall household transportation costs and increases access to job opportunities to those without automobiles and/or households with limited transportation choices. Transit options can provide safe routes to work, school, medical appointments, and shopping. Public transit is also one of the safest modes of surface transportation in the U.S.

PUBLIC TRANSIT PROVIDERS

Northwest Arkansas has two public transit providers that currently operate in the urban and rural areas of the region and include Ozark Transit Authority (ORT) and University of Arkansas Razorback Transit. Approximately 1.9 million unlinked trips were provided in 2019 between the two public transportation systems, with average daily unlinked trips of 1,000 on ORT and 8,500 unlinked trips on Razorback Transit (Table 11.1). Over the last five years, both systems have struggled to maintain and/or increase ridership year over year. Both ORT and Razorback Transit coordinate their routes to avoid duplication of service and provide key connections/transfers between the two systems within Fayetteville and University of Arkansas.

Razorback Transit						Ozark Regional Transit					
Annual Unlinked Trips Fixed Route and Demand Response						Annual Unlinked Trips Fixed Route and Demand Response					
Year	Unlinked Trips	Numeric Change	Percent Change	Fixed Route	Demand Response	Year	Unlinked Trips	Numeric Change	Percent Change	Fixed Route	Demand Response
2007	1,280,648			1,272,041	8,607	2007	153,242			127,407	25,835
2008	1,223,358	-57,290	-4.47%	1,216,284	7,074	2008	205,256	52,014	33.94%	187,839	17,417
2009	1,335,028	111,670	9.13%	1,327,673	7,355	2009	193,082	-12,174	-5.93%	177,959	15,123
2010	1,575,149	240,121	17.99%	1,567,802	7,347	2010	237,184	44,102	22.84%	212,491	24,693
2011	1,647,481	72,332	4.59%	1,639,066	8,415	2011	263,828	26,644	11.23%	238,048	25,780
2012	1,933,690	286,209	17.37%	1,924,886	8,804	2012	296,405	32,577	12.35%	269,355	27,050
2013	2,078,006	144,316	7.46%	2,069,321	8,685	2013	288,501	-7,904	-2.67%	268,302	20,199
2014	1,978,500	-99,506	-4.79%	1,969,318	9,182	2014	302,821	14,320	4.96%	274,441	28,380
2015	2,005,267	26,767	1.35%	1,996,376	8,891	2015	317,448	14,627	5.33%	287,458	29,990
2016	1,826,149	-179,118	-8.93%	1,817,664	8,485	2016	319,060	1,612	0.56%	288,602	30,458
2017	1,706,497	-119,652	-6.55%	1,697,040	9,457	2017	261,335	-57,725	-20.00%	235,277	26,058
2018	1,645,305	-61,192	-3.59%	1,635,492	9,813	2018	247,155	-14,180	-6.03%	225,971	21,184
2019	1,601,261	-44,044	-2.68%	1,591,106	10,155	2019	271,936	24,781	10.97%	252,609	19,327

Source: 2007-2019 National Transit Database, University of Arkansas Data Analysis Year July1 to June 30

Table 11.1 - Fixed Route Unlinked Trips and Demand Response

The American Public Transportation Association has provided the definition for unlinked trips as *“unlinked passenger trips is the number of times passengers board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination and regardless of whether they pay a fare, use a pass or transfer, ride for free, or pay in some other way. A person riding only one vehicle from origin to destination takes one unlinked passenger trip; a person who transfers to a second vehicle takes two unlinked passenger trips; a person who transfers to a third vehicle takes three unlinked passenger trips...”*

OZARK REGIONAL TRANSIT AUTHORITY

Ozark Regional Transit (ORT) began operations in Northwest Arkansas in 1979 under the direction of Community Resources Group (CRG), a local non-profit organization. In 2001, CRG announced that they would no longer provide the service. At that time, the Mayors of Bentonville, Fayetteville, Springdale, and Rogers as well as the County Judges of Benton, Carroll, Madison and Washington Counties formed a Board to manage ORT. One of their first acts as a Board was to hire a professional transit management firm, and First Transit was hired to manage the system.

Prior to 2002, ORT provided only dial-a-ride services in this area, predominately to support the health and human services agencies. ORT received rural FTA funding starting in 1980. With the tremendous growth in Northwest Arkansas, in 1990, the Fayetteville/ Springdale metropolitan area became an Urbanized Area and ORT began receiving FTA financial assistance for Urbanized Areas over 50,000 in population. In 2002, the Urbanized Area FTA funding increased from a total of \$750,000 to \$1.7 million, which is currently split between ORT and Razorback Transit, which serves the University of Arkansas students and residents of Fayetteville.



Currently, ORT receives funding from the FTA in rural and urban funding, a State rental car tax and the local match to FTA monies from the cities and counties it serves.

In 2002, ORT began its first fixed route in south Fayetteville. In 2005, it began six new fixed routes, with two in Fayetteville, Rogers and Springdale, and one in Bentonville.

ORT also provides complementary ADA paratransit service within ¼ mile of a fixed route and demand response service in Benton, Washington and portions of Madison and Carroll County. ORT buses are all equipped with bike racks and wireless internet service.

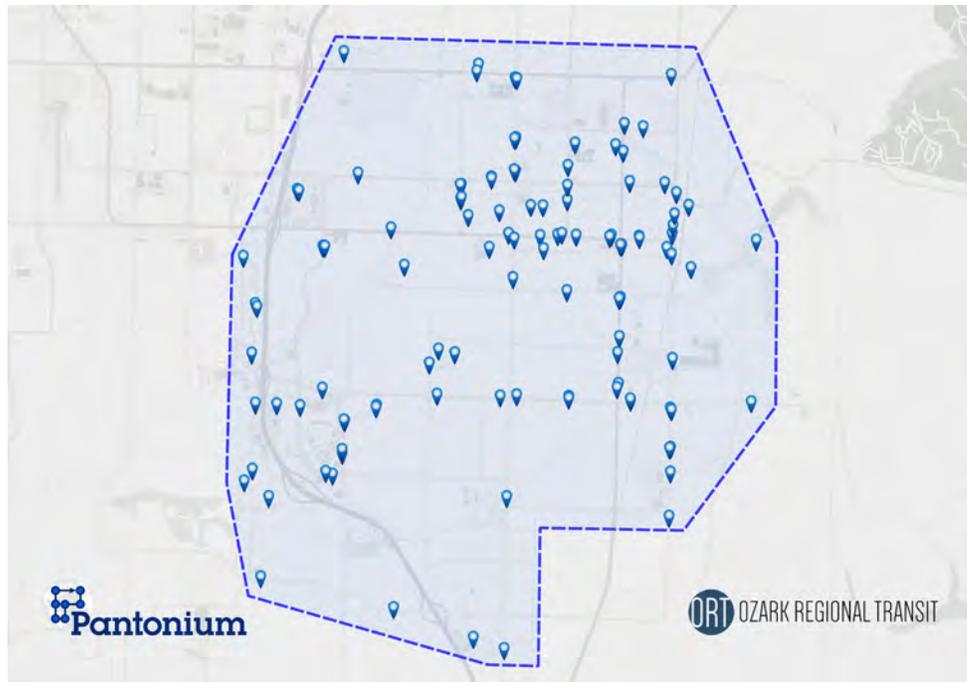
ORT continues to work with local industries to develop substantive public transit routes that serve the needs of employers and employees. ORT continues to investigate industry partnerships to fund the costs associated with regular operation of additional public transit routes. Development of these relationships with the employers is vital in securing the funding necessary to have a fully functional, vibrant and reliable transit system in Northwest Arkansas. These relationships will help ORT build a public transit network that provides meaningful connections for work, entertainment, education and medical trips.

In January 2017, 20 buses were in a devastating fire at the ORT fleet maintenance facility. ORT applied for and was awarded a \$3.6M Sec 5339(b) FTA grant to replace 12 of the buses with the remaining eight buses replaced with insurance funds.

In 2018, ORT applied for and was awarded a \$2.9M Sec. 5339(b) grant to replace their administrative offices. The building was completed in fall of 2020.



In July 2020, On Demand Transit was launched in the City of Rogers. Operating hours are Monday through Friday, 7:00 AM - 6:30 PM. On Demand Transit allows a rider to schedule trips from bus stop to bus stop using the On Demand Transit App on a smart phone, desktop computer, or simply calling ORT. Riders can also just board the bus and indicate to the driver where they wish to go.



ORT provides approximately 272,936 unlinked trips (Fixed Route, Paratransit-Demand Response, and Charter) with 252,609 unlinked trips on the fixed route bus system (2019) (Table 11.2 and Figure 11.1).

Ozark Regional Transit Annual Unlinked Trips Fixed Route and Demand Response						Ozark Regional Transit Fixed Route Service Measures								
Year	Unlinked Trips	Numeric Change	Percent Change	ORT Fixed Route (Regionwide)	Demand Response	Year	ORT Annual Fixed Route Vehicle Revenue Miles (Regionwide)	Numeric Change Revenue Miles	Percent Change Revenue Miles	ORT Annual Fixed Route Vehicle Revenue Hours (Regionwide)	Numeric Change Revenue Hours	Percent Change Revenue Hours	Unlinked Fixed Route Trips per Revenue Mile	Unlinked Fixed Route Trips per Revenue Hour
2007	153,242			127,407	25,835	2007	376,130			23,175			0.3	5.5
2008	205,256	52,014	33.94%	187,839	17,417	2008	336,248	-39,882	-10.60%	23,566	391	1.69%	0.6	8.0
2009	193,082	-12,174	-5.93%	177,959	15,123	2009	378,216	41,968	12.48%	24,557	991	4.21%	0.5	7.2
2010	237,184	44,102	22.84%	212,491	24,693	2010	459,491	81,275	21.49%	26,826	2,269	9.24%	0.5	7.9
2011	263,828	26,644	11.23%	238,048	25,780	2011	460,852	1,361	0.30%	26,643	-183	-0.68%	0.5	8.9
2012	296,405	32,577	12.35%	269,355	27,050	2012	437,791	-23,061	-5.00%	26,207	-436	-1.64%	0.6	10.3
2013	288,501	-7,904	-2.67%	268,302	20,199	2013	470,968	33,177	7.58%	27,983	1,776	6.78%	0.6	9.6
2014	302,821	14,320	4.96%	274,441	28,380	2014	689,894	218,926	46.48%	39,944	11,961	42.74%	0.4	6.9
2015	317,448	14,627	4.83%	287,458	29,990	2015	864,338	174,444	25.29%	50,257	10,313	25.82%	0.3	5.7
2016	319,060	1,612	0.51%	288,602	30,458	2016	883,533	19,195	2.22%	50,606	349	0.69%	0.3	5.7
2017	261,335	-57,725	-18.09%	235,277	26,058	2017	766,668	-116,865	-13.23%	45,304	-5,302	-10.48%	0.3	5.2
2018	247,155	-14,180	-5.43%	225,971	21,184	2018	603,608	-163,060	-21.27%	38,190	-7,114	-15.70%	0.4	5.9
2019	271,936	24,781	10.03%	252,609	19,327	2019	529,070	-74,538	-12.35%	34,101	-4,089	-10.71%	0.5	7.4

Source: 2007-2019 National Transit Database, ORT Data

Table 11.2 - Fixed Route Unlinked Trips and Demand Response ORT

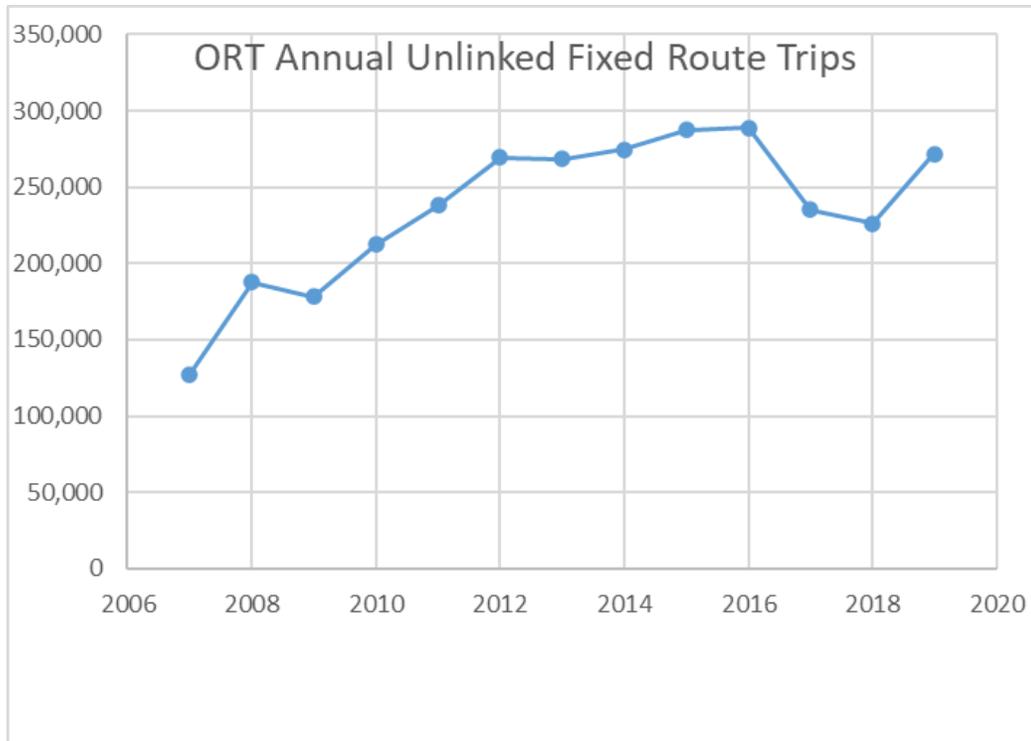


Figure 11.1 - ORT Unlinked Trips - Fixed Route 2007-2019

RAZORBACK TRANSIT

Razorback Transit originated in 1979, through the joint efforts of the University of Arkansas-Fayetteville (UA), ARDOT and the NWARPC (the MPO for Northwest Arkansas). In July 2004, Razorback Transit became a direct recipient of Federal Transportation Administration (FTA) funds.

Razorback Transit provides fare-free transportation to on-campus locations and major off-campus living and shopping areas in Fayetteville.

Razorback Transit Annual Unlinked Trips Fixed Route and Demand Response								Razorback Transit Fixed Route Service Measures				
Year	Unlinked Trips	Numeric Change	Percent Change	Razorback Fixed Route (Fayetteville)	Fixed Route Numeric Change	Fixed Route Percent Change	Demand Response	Year	Razorback Annual Fixed Route Vehicle Revenue Miles	Razorback Annual Fixed Route Vehicle Revenue Hours	Razorback Unlinked Fixed Route Trips per Revenue Mile	Razorback Unlinked Fixed Route Trips per Revenue Hour
2007	1,280,648			1,272,041			8,607	2007	279,670	27,870	4.5	45.6
2008	1,223,358	-57,290	-4.47%	1,216,284	-55,757	-4.38%	7,074	2008	281,280	29,044	4.3	41.9
2009	1,335,028	111,670	9.13%	1,327,673	111,389	9.16%	7,355	2009	281,098	29,181	4.7	45.5
2010	1,575,149	240,121	17.99%	1,567,802	240,129	18.09%	7,347	2010	302,288	29,937	5.2	52.4
2011	1,647,481	72,332	4.59%	1,639,066	71,264	4.55%	8,415	2011	320,554	32,335	5.1	50.7
2012	1,933,690	286,209	17.37%	1,924,886	285,820	17.44%	8,804	2012	365,798	36,912	5.3	52.1
2013	2,078,006	144,316	7.46%	2,069,321	144,435	7.50%	8,685	2013	413,245	39,636	5.0	52.2
2014	1,978,500	-99,506	-4.79%	1,969,318	-100,003	-4.83%	9,182	2014	415,503	40,077	4.7	49.1
2015	2,005,267	26,767	1.35%	1,996,376	27,058	1.37%	8,891	2015	464,199	43,934	4.3	45.4
2016	1,826,149	-179,118	-8.93%	1,817,664	-178,712	-8.95%	8,485	2016	484,355	44,258	3.8	41.1
2017	1,706,497	-119,652	-6.55%	1,697,040	-120,624	-6.64%	9,457	2017	547,338	49,456	3.1	34.3
2018	1,645,305	-61,192	-3.59%	1,635,492	-61,548	-3.63%	9,813	2018	557,558	50,208	2.9	32.6
2019	1,601,261	-44,044	-2.68%	1,591,106	-44,386	-2.71%	10,155	2019	596,434	51,244	2.7	31.0

**Table 11.7 - Fixed Route Unlinked Trips and Demand Response
Razorback Transit**

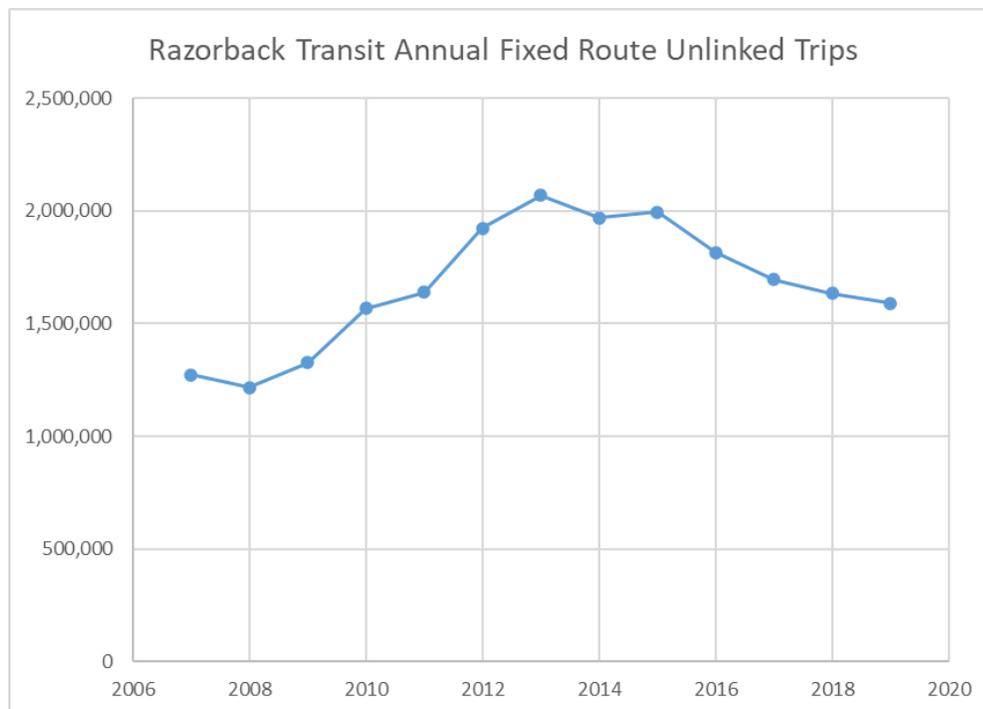


Figure 11.2 - Razorback Transit Unlinked Trips 2007-2019

TRANSIT RIDERSHIP

Trips are reported to the National Transit Database (NTD) and the term “unlinked trips” are used to track the number of trips made by system and are reported by transit agency. The American Public Transportation Association defines unlinked trips as “...the number of times passengers board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination and regardless of whether they pay a fare, use a pass or transfer, ride for free, or pay in some other way. A person riding only one vehicle from origin to destination takes one unlinked passenger trip; a person who transfers to a second vehicle takes two unlinked passenger trips; a person who transfers to a third vehicle takes three unlinked passenger trips...”.

2019 Unlinked Trips

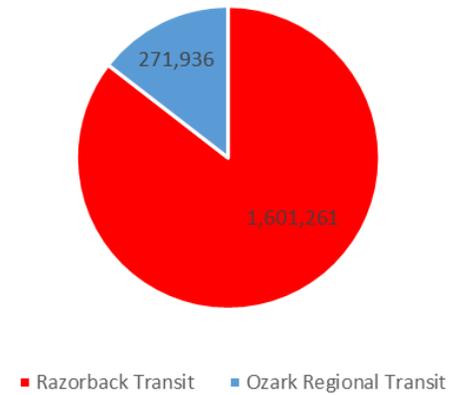


Figure 11.3 - Annual Unlinked Trips for 2019

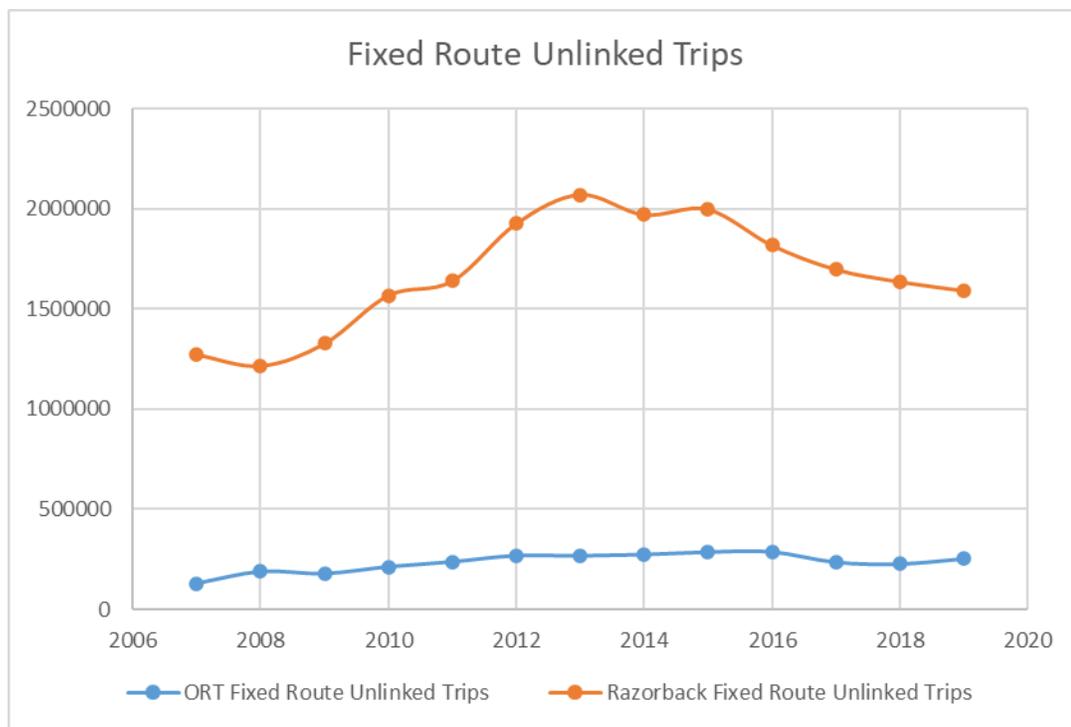


Figure 11.3 - Fixed Route Unlinked Trips

System information and performance measures may be found for all U.S. public transit providers through the [National Transit Database](#) (Figure 11.4 and Table 11.8).

NATIONAL TRANSIT DATABASE PERFORMANCE MEASURES

Fixed route transit performance measures for service effectiveness are calculated for each public transit system as part of the National Transit Database (NTD) reporting requirements. Two of the performance measures for service effectiveness are based on (1) the number of fixed route unlinked trips per revenue mile and (2) the number of unlinked fixed route trips per revenue hour. These measures are reported from 2007 to 2019 for both ORT and Razorback Transit based on the NTD reports.

Razorback Transit Fixed Route Service Measures				
Year	Razorback Annual Fixed Route Vehicle Revenue Miles	Razorback Annual Fixed Route Vehicle Revenue Hours	Razorback Unlinked Fixed Route Trips per Revenue Mile	Razorback Unlinked Fixed Route Trips per Revenue Hour
2007	279,670	27,870	4.5	45.6
2008	281,280	29,044	4.3	41.9
2009	281,098	29,181	4.7	45.5
2010	302,288	29,937	5.2	52.4
2011	320,554	32,335	5.1	50.7
2012	365,798	36,912	5.3	52.1
2013	413,245	39,636	5.0	52.2
2014	415,503	40,077	4.7	49.1
2015	464,199	43,934	4.3	45.4
2016	484,355	44,258	3.8	41.1
2017	547,338	49,456	3.1	34.3
2018	557,558	50,208	2.9	32.6
2019	596,434	51,244	2.7	31.0

Ozark Regional Transit Fixed Route Service Measures				
Year	ORT Annual Fixed Route Vehicle Revenue Miles (Regionwide)	ORT Annual Fixed Route Vehicle Revenue Hours (Regionwide)	Unlinked Fixed Route Trips per Revenue Mile	Unlinked Fixed Route Trips per Revenue Hour
2007	376,130	23,175	0.3	5.5
2008	336,248	23,566	0.6	8.0
2009	378,216	24,557	0.5	7.2
2010	459,491	26,826	0.5	7.9
2011	460,852	26,643	0.5	8.9
2012	437,791	26,207	0.6	10.3
2013	470,968	27,983	0.6	9.6
2014	689,894	39,944	0.4	6.9
2015	864,338	50,257	0.3	5.7
2016	883,533	50,606	0.3	5.7
2017	766,668	45,304	0.3	5.2
2018	603,608	38,190	0.4	5.9
2019	529,070	34,101	0.5	7.4

Table 11.8 - Fixed Transit Route Service Measures (ORT and RT)

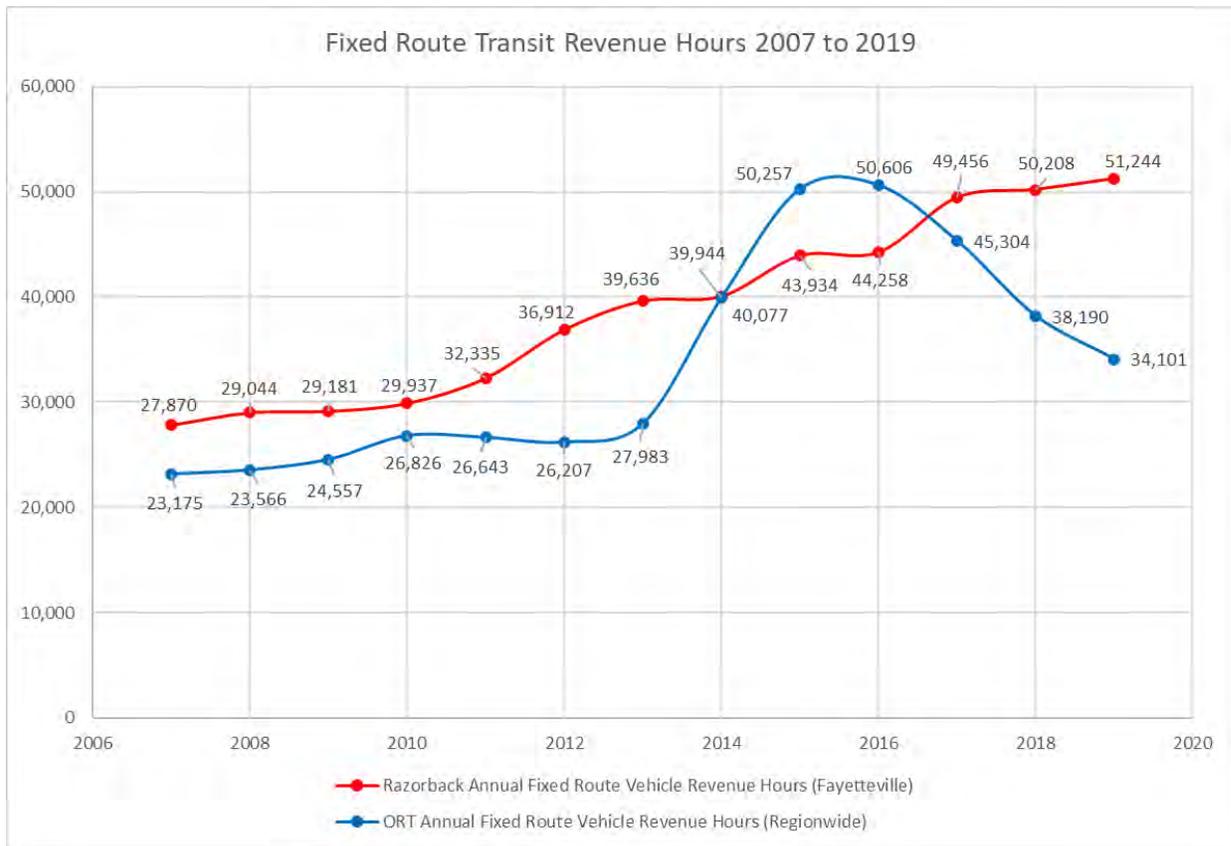


Figure 11.4 - Fixed Transit Route Revenue Hours (ORT and RT)

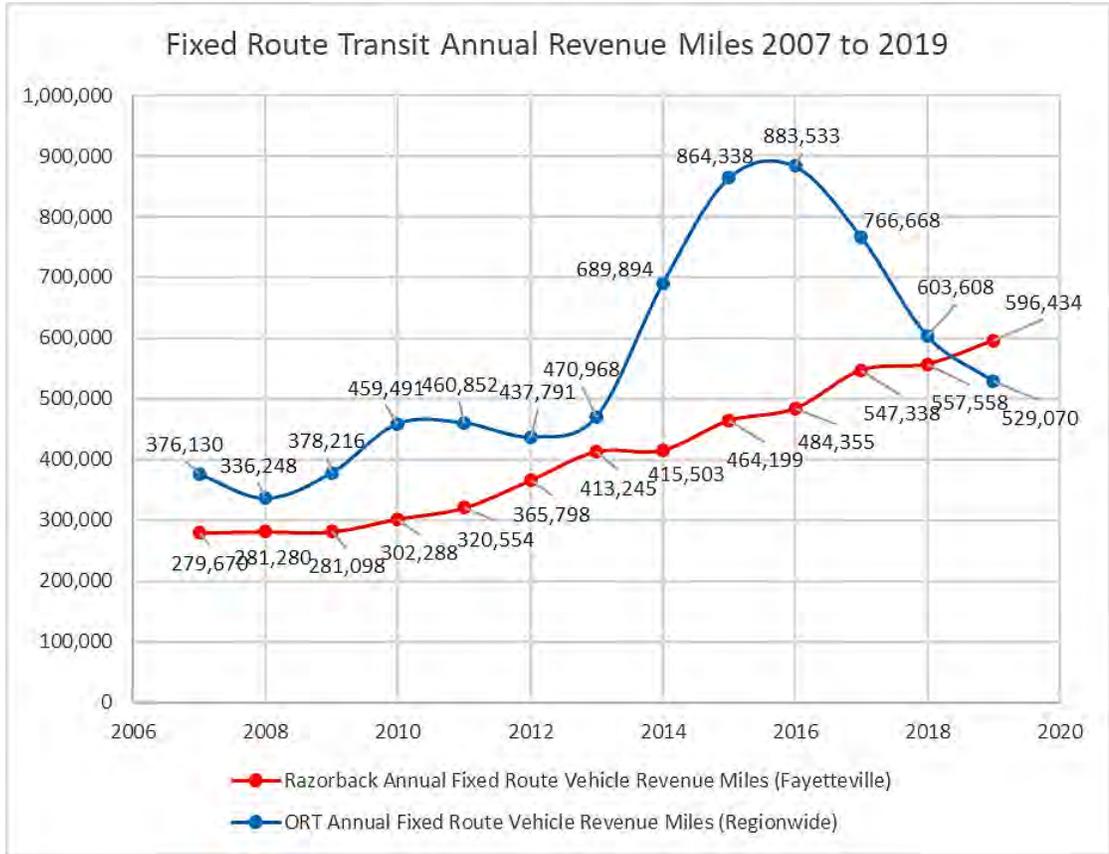


Table 11.8 - Fixed Transit Route Revenue Miles (ORT and RT)

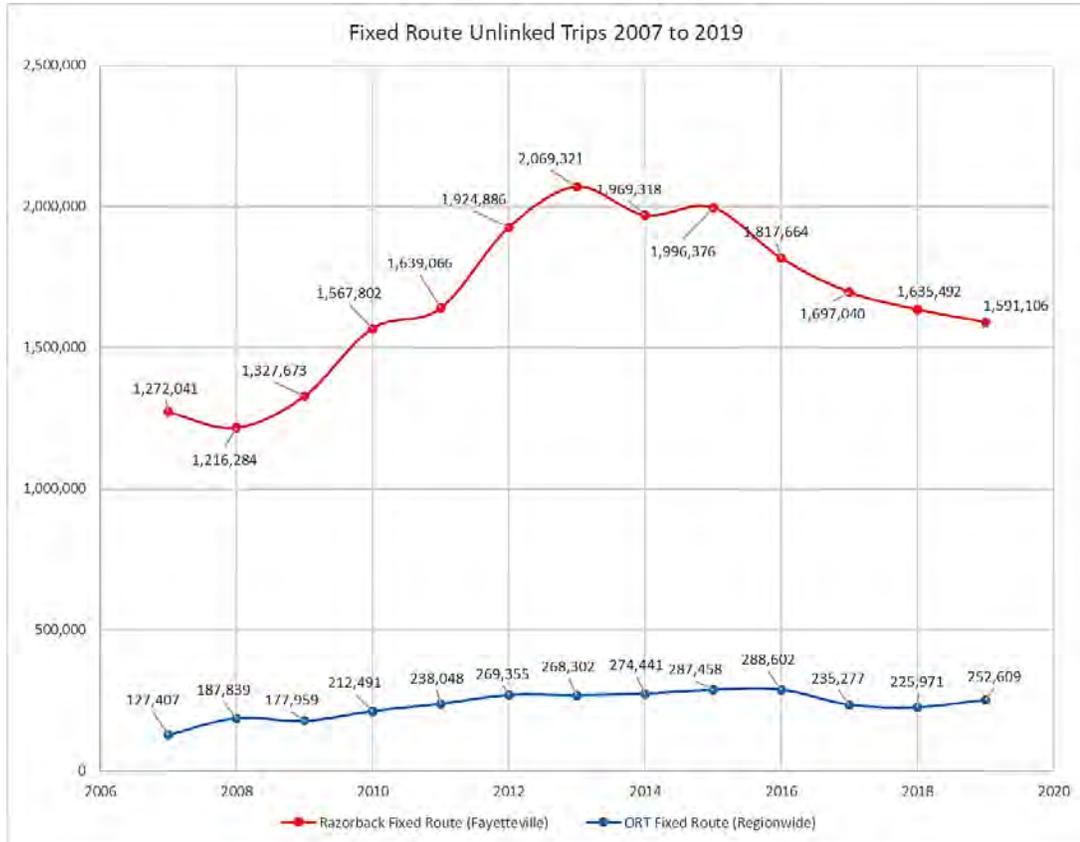


Figure 11.5 - Fixed Transit Route Unlinked Trips (ORT and RT)

The unlinked fixed route trips per revenue hour have increased for ORT to 7.4 trips per hour in 2019. Razorback Transit unlinked fixed route trips has decreased to 31 trips per hour in 2019.



Figure 11.6 - Unlinked Fixed Route Trips per Revenue Hour and Revenue Hour (ORT and RT)

Unlinked trips per revenue mile for ORT has fluctuated between 0.30 and 0.60 trips per revenue mile. Razorback Transit unlinked trips per revenue mile was 2.7 trips in 2019.

FEDERAL TRANSIT FUNDING

The Urbanized Area Formula Program funds are apportioned to designated recipients within urbanized areas with populations of 200,000 or more. NWARPC is the designated recipient for the Fayetteville-Springdale-Rogers AR-MO Urbanized Area. The Urbanized Area is apportioned FTA funding annually with approximately \$283,926 in Section 5339 funds and \$2.7 million in Section 5307 FTA Urbanized Area Formula Program funds. These funds are programmed by the NWARPC and are utilized by both ORT and Razorback Transit for capital, operating assistance, preventative maintenance, ADA Paratransit Service, and Enhancements. The regional also receives FTA 5310 enhanced mobility of seniors and individuals with disabilities funds and this program is currently administered by ARDOT.

The rural area is also apportioned Section 5311 funds, and these are used by ORT to provide demand response service. MAP-21/FAST Act expanded the use of Section 5307 funds for operating expenses. Under current regulations, each transit system that operates 100 or fewer buses may use these funds for operating expenses.

FTA 5307 FFY 2021	\$2,697,096	Fayetteville--Springdale--Rogers, AR—MO Apportionment
FTA 5339 FFY 2021	\$ 283,926	Fayetteville--Springdale--Rogers, AR—MO Apportionment
FTA 5310 FFY 2021	\$ 230,988	Fayetteville--Springdale--Rogers, AR—MO Apportionment
FTA 5311 FFY 2021	\$ 192,859	Rural Area Formula Program (Award to Ozark Regional Transit)

The table below shows available FTA programed and local match funds for the next 25 years, including the inflation rate.

2045 MTP Transit Projects 2025 to 2045 (2021 to 2024 projects shown in TIP) Available FTA Federal Funding + Required Local Match + Local Overmatch Inflated at 2% per year Note: The region currently spends approximately \$8M per year on transit	2025 to 2030	2031 to 2045	Total
FTA Section 5339 Capital -ORT and Razorback Transit -Fayetteville-Springdale-Rogers Urbanized Area	\$ 2,600,000	\$ 8,000,000	\$ 10,600,000
FTA Section 5307 Capital and Operations - ORT and Razorback Transit - Fayetteville-Springdale-Rogers Urbanized Area	\$47,800,000	\$ 147,500,000	\$195,300,000
FTA Section 5310 Enhanced Mobility of Seniors & Individuals with Disabilities - Fayetteville-Springdale-Rogers Urbanized Area	\$ 1,500,000	\$ 4,800,000	\$ 6,300,000
FTA Section 5311 Formula Grants for Rural Areas - Demand Response Transit - Benton County and Washington County	\$ 875,000	\$ 2,672,000	\$ 3,547,000
Total	\$ 52,775,000	\$ 162,972,000	\$ 215,747,000

Bus and Bus Facilities Program (49 U.S.C. §5339) – Transit

MAP-21/FAST Act created a new formula grant program for bus and bus facilities that replaced the Section 5309 discretionary program. The program provides funding for replacing, rehabilitating, and purchasing new buses and bus-related equipment and facilities. The Urbanized Area receives approximately \$241,527 annually in Federal funds matched by \$60,382 in local funds for the replacement of vehicles and related capital projects. Funding is utilized by both Razorback and Ozark Regional Transit for replacing buses.

Enhanced Mobility of Seniors and Individuals with Disabilities Program (49 U.S.C. §5310)

Enhanced Mobility of Seniors and Individuals with Disabilities Program is a formula assistance program to improve mobility for seniors and individuals with disabilities. Public transportation projects may be implemented in areas where public transportation is insufficient, inappropriate, or unavailable; public transportation projects that exceed the requirements of the Americans with Disabilities Act (ADA); projects that improve access to fixed-route service and decrease reliance on complementary paratransit; and alternatives to public transportation projects that assist seniors and individuals with disabilities.

Rural Area Formula Program (49 U.S.C. §5311)

The Rural Area Formula Program is a formula grant program that provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000. Currently, Ozark Regional Transit receives approximately \$140,000 per year in Federal funds and requires a 20 percent to 50 percent local match depending on the type of project. ORT provides demand response service to the rural areas within the MPA.

TRANSIT ASSET MANAGEMENT PLANS (TAMP)

A Transit Asset Management Plan (TAMP) is a business model that uses the condition of assets to guide the optimal prioritization of funding at transit agencies in order to keep transit systems in a State of Good Repair (SGR). By implementing a TAMP, the benefits include:

- Improved transparency and accountability for safety, maintenance, asset use, and funding investments;
- Optimized capital investment and maintenance decisions;
- Data-driven maintenance decisions; and
- System safety and performance outcomes.



The consequences of an asset not being in an SGR include:

- Safety risks (crashes per 100,000 revenue miles);
- Decreased system reliability (on-time performance);
- Higher maintenance costs; and/or
- Lower system performance (missed runs due to breakdown).

TRANSIT ASSET MANAGEMENT PLAN (TAMP) POLICY

Both Ozark Regional Transit and Razorback Transit have adopted Transit Asset Management Plans to aid in: (1) assessment of the current condition of capital assets; (2) determine what condition and performance of its assets should be (if they are not currently in a State of Good Repair); (3) identify the unacceptable risks, including safety risks, in continuing to use an asset that is not in a State of Good Repair; and (4) deciding how to best balance and prioritize reasonably anticipated funds (revenues from all sources) towards improving asset condition and achieving a sufficient level of performance within those means.

As Tier II public transportation providers, both providers have developed and implemented Transit Asset Management Plans containing the following elements:

1. **Asset Inventory Portfolio:** An inventory of the number and type of capital assets to include: Rolling Stock, Facilities, and Equipment.
2. **Asset Condition Assessment:** A condition assessment of those inventoried assets for which the provider has direct ownership and capital responsibility.
3. **Decision Support Tools and Management Approach:** A description of the analytical processes and decision-support tools that the provider uses to estimate capital investment needs over time, and develop its investment prioritization.
4. **Investment Prioritization:** The provider project-based prioritization of investments, developed in accordance with §625.33.

The three components of the asset inventory required as part of the TAMP are:

- **Rolling Stock:** All owned and operated revenue service vehicles used in the provision of providing public transportation, and includes vehicles used to primarily transport passengers.
- **Equipment:** Equipment evaluated per FTA requirements in this TAMP, is all non-revenue service vehicles regardless of value, and any owned equipment with a cost of over \$50,000 in acquisition value.
- **Facilities:** Facilities are any structure used in providing public transportation where a provider owns and has a direct capital responsibility.

FTA DESIGNATED RECIPIENT

The Northwest Arkansas Regional Planning Commission is the designated recipient for FTA Urban Programs – FTA Section 5307, Section 5339, and Section 5310. As the Designated Recipient, NWARPC Policy Committee allocates funding between the two urban providers for Section 5307 and Section 5339. ARDOT currently administers the Section 5310 funding for NWARPC.

NWARPC develops, in coordination with providers, and approves an annual Transit Program of Projects (POP) for each transit agency and funding for associated transit planning. The Program of Projects includes bus procurement, operating assistance, preventative maintenance, and ADA paratransit service for each agency.

The individual bus fleets at each agency are evaluated annually by each provider based on the adopted TAMP targets for condition, age, useful life, and overall condition rating. The type of equipment and bus fleets deployed and maintained in the region is determined by each provider and replacement is evaluated by providers and FTA based on FTA Useful Life Benchmarks.

Ozark Regional Transit recently replaced their entire fleet with ARBOC buses in 2017 and 2019. Ozark Regional Transit has eight (2017) cutaway buses and 12 (2019) buses. The FTA Useful Life Benchmark is 10 years for both types of buses and 300,000 miles for a larger bus and 250,000 miles for cutaway bus.

Both transit providers make rolling stock selections that enable the most effective use of the currently available funding streams. The goal is to meet the minimum regional service standards. The technology for alternatively powered rolling stock is continually evolving and the capital expense and associated required infrastructure is considerably higher than current funding can support in addition to trying to meet the minimum regional service standards, frequency, hours of service, and areas served.

To maintain the lowest possible average fleet age Razorback Transit replaces vehicles regularly. This contributes to lower average maintenance costs and allows more service to be provided to the public. Both transit providers will continue to monitor evolving alternatively fueled technologies, and available funding levels to provide the best public transit services for the region.

HUMAN SERVICE PROVIDERS

While ORT and Razorback Transit provide fixed route transit service throughout the region, there are many other transit providers in the area. Human service agencies provide a vital role in the overall transportation needs of the region. They provide access to agency services and/or to meet the basic, day-to-day mobility needs of transportation- disadvantaged populations, especially individuals with disabilities, older adults, and people with low incomes.

There are four human service agencies in the Northwest Arkansas region actively participating in ARDOT-administered transit programs Section 5310. Most of these agencies provide service to specific clientele for shopping, medical appointments, social, work, or education activities.

TRANSIT COORDINATION PLANNING

Within the MPA area there are two public transit systems, Razorback Transit and ORT, as well as a number of human service agencies that provide transit options for specific populations.

In January 2013, ARDOT published the Arkansas Statewide Transit Coordination Plan: 2012 (TCP). The TCP replaced the sixteen separate local transit coordination plans that were developed in 2007 and 2008 as a result of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). In Northwest Arkansas, the TCP replaced the NWA Public Transit-Human Services Coordinated Transportation Plan (Coordination Plan). In June 2018, ARDOT published the updated Arkansas Statewide Transit Coordination Plan.

The Federal transportation legislation under Moving Ahead for Progress in the Twenty-First Century (MAP-21) and the Fixing America’s Surface Transportation Act (FAST Act), requires that projects for certain FTA programs be derived from a locally developed, coordinated public transit-human services transportation plan. ARDOT’s updated plan is intended to satisfy the federal requirements of Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities Program, which is a consolidation of the old Section 5310 and Section 5317 programs, and includes the New Freedom program. These requirements are aimed at improving transit services for persons with disabilities, older adults and individuals with low incomes and ensuring that communities are coordinating transit resources provided through multiple federal programs.

Transportation service coordination is the ongoing process of transportation providers and human service agencies communication and working together to more efficiently manage limited transportation resources. The overall objective of the Arkansas Statewide Transit Coordination Plan is to determine where there are gaps in public transit and human services transportation service in Arkansas and develop coordination strategies and identify projects to address identified gaps. For more information go to [ARDOT's Publications Page](#).

For guidance on the administration and preparation of grant applications for the Enhanced Mobility of Seniors and Individuals with Disabilities under 49 U.S.C. 5310, FTA has issued Circular 9070.1G. This revision of an earlier circular incorporated provisions of MAP-21/FAST Act and includes the most current available guidance as of the date of publication (7-7-14).

Inter-City Bus Transportation

The Jefferson Lines Bus Service travels through Northwest Arkansas. A Jefferson Lines depot is located in Fayetteville at 3075 Wedington Drive with the hours of Monday through Saturday, 9:00 AM to 5:00 PM. Another stop is located in Rogers at 4601 W. Walnut Street. The Jefferson Lines operates in thirteen states including the Arkansas contiguous states of Texas, Oklahoma, Kansas, and Missouri. Other Arkansas stops include Clarksville, Conway, Fort Smith, Harrison, Little Rock, Ozark, Pine Bluff, and Russellville. Out-of-state nearby connections include Tulsa, Oklahoma, Joplin and Springfield in Missouri, and Coffeerville, Kansas.



CONNECT NORTHWEST ARKANSAS - 10-YEAR TRANSIT DEVELOPMENT PLAN

Connect Northwest Arkansas (NWA) is a 10-Year Transit Development Plan (TDP) that will serve as a “Blueprint” for improving and expanding transit in the NWA region. The Northwest Arkansas Regional Planning Commission (NWARPC), Ozark Regional Transit (ORT) and Razorback Transit (RT) are committed to ensuring that this plan improves transit by connecting NWA at the regional and local levels, saves people time and ultimately provides the community with greater mobility and freedom.

Transportation opportunities and challenges are regional and cannot be defined by one jurisdiction. NWA is a massive region and spans over 40 miles from south to north with transit needs that vary throughout the linear corridor. Connect NWA focuses on how to improve fixed route transit and builds upon the recent and ongoing success both ORT and RT have had coordinating and expanding service in the four main urban areas and surrounding communities that include (from south to north) Fayetteville, Springdale, Rogers and Bentonville.

Connect NWA establishes a shared understanding of what successful transit looks like, how to design effective service and ultimately how to implement it regionally and locally. Transit may not seem like the optimal or most popular mode of travel in the NWA region since the 420,455 people who live in the area only average 8,000 transit boardings per day. However, something is missing from this statistic and the conversation in general: the potential for transit in the region is great and these numbers reflect a transit system that is underfunded and not designed to meet the transit potential of the region. It is critical that the NWA Community understands the following about transit:

- The benefits of transit (why does transit matter)?
- What makes transit effective?
- What supports transit?
- How do you design transit?

Before proceeding it is important to establish a shared understanding about what a transit network is and its most basic components. A transit network is a set of routes that follow specific alignments with stops along the way that operates during certain days and times of the day and at various service levels.

From the time it starts in the morning to the time it stops in the evening is known as its span. How often a bus or train arrives at a given stop or departs from a terminal is known as its frequency.



Why does transit matter?



Save Money
A household can save \$10k by living with one less car.



Reduce Congestion
Congestion costs Northwest Arkansas residents \$103M per year. Transit helps reduce the number of vehicles on roadways.



Environment Friendly
Public transit saves the country 4.16 billion gallons of fuel per year.



Travel Safely
Transit is 10x safer than traveling by automobile.

What is effective transit?



Effective Transit...

- TAKES ME WHERE I WANT TO GO
- ...WHEN I WANT TO GO THERE
- IT IS RELIABLE
- IT SAVES ME TIME
- IT GIVES ME FREEDOM

What supports transit?

Density



Transit works best when stops are located near a variety of destinations where people want to go such as job centers, schools, medical facilities, & housing complexes.

Connectivity



Transit should provide seamless transitions to other routes, park & rides, sidewalks, and bicycle routes. This ensures ease and comfort for passengers navigating the system.

Ease of Use



Transit should be easy to navigate and convenient to use. Great transit is integrated with technology to make taking transit an easy choice for travel.

Community Support



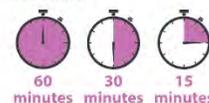
Whether you advocate for transit at city hall or simply choose to ride the bus, support from the community encourages local leaders to invest in great transit.

How do you design transit?

Improving transit is often a balancing act of deciding where the bus picks you up, how often the bus comes, and when service runs. In other words, frequency, span of service, and route design are all important aspects of delivering effective transit service.

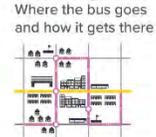
Frequency

How often the bus comes



Route Design

Where the bus goes and how it gets there



Span of Service

How early service starts & how late service runs



The study began in January 2019 with a technical analysis that looked at ridership, travel patterns, travel time and on-time performance for the entire NWA study area. The first major milestone of the project was to develop a Public Engagement Plan that would ensure the entire study area had an opportunity to learn about transit and provide input to directly inform the recommendations of the Connect NWA TDP.

Parallel to the public engagement effort was the existing conditions analysis that consists of the following technical analyses:

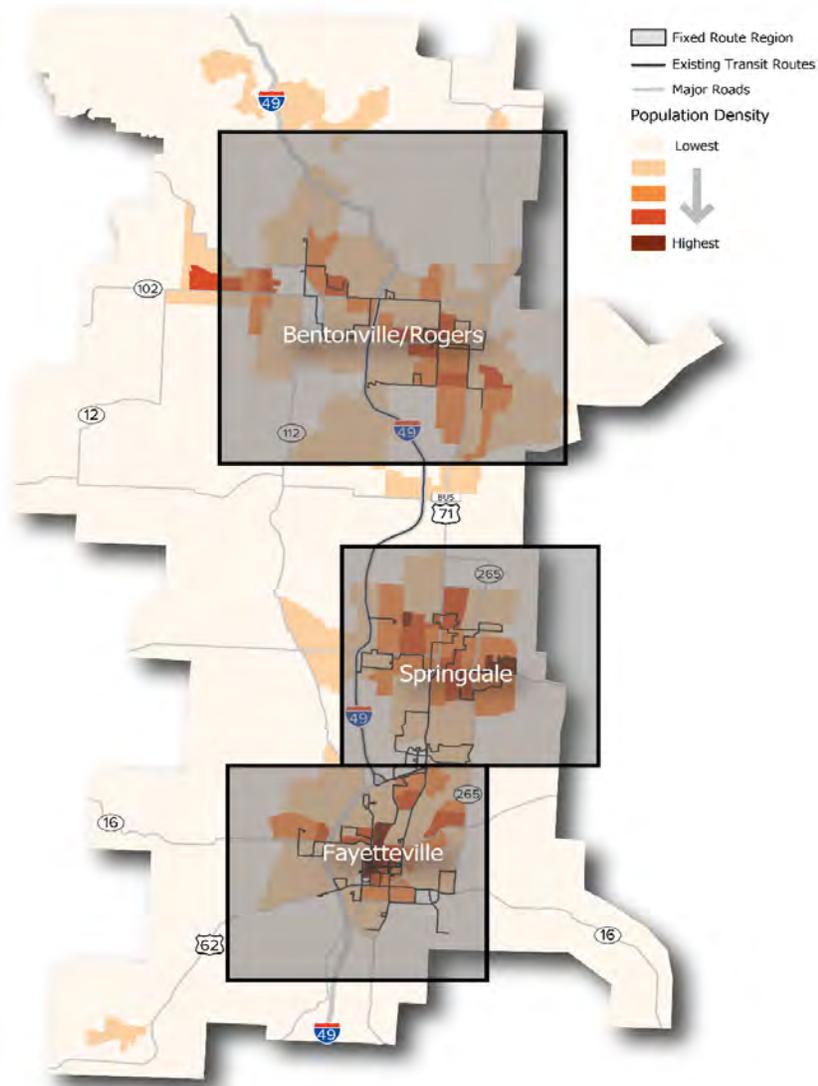
- Benchmarking Review
- Market Analysis
- Fixed Route Transit Operational Analysis

The next steps in the process involved the development of a Regional Transit Framework that included recommendations for regional and local transit solutions with service level and route alignment modifications and additions. The project team organized and hosted two major events in each of the counties in the study area that provided an opportunity for the community to give input on the recommendations. The project team used this input to develop a Preferred Alternative (PA) for both the region and each individual community. The final steps of the TDP included the development of three critical elements to help guide and implement Connect NWA:

- Regional Service Standards
- Detailed implementation plan with prioritized routes and phasing
- Funding recommendations on allocating Federal and Local funds.

Connect NWA represents a complete 10-Year TDP for region and is made up of many individual components that can stand on their own and serve as tools to help advance and implement the plan.

NWA Transit Service Region & Population Density



The Regional Transit Framework takes the shape of customized route and network recommendations built upon the technical analysis and informed by the public engagement process. The project team identified key transit corridors that provided enhanced connectivity and direct routing focused on moving NWA residents in an intuitive, time efficient manner that was not restricted by political boundaries. The draft recommendations were provided to the public for comment through both a series of community events and online and paper surveys to obtain public feedback about the proposed changes. Following the public outreach phase of the alternatives development, feedback was incorporated back into the draft recommendations to create a locally preferred alternative (LPA) truly supported by the community. The results shown in below are a product of the final recommendations comprised of level of services, route modifications, new routes, new mobility zones and proposed mobility hub locations.

REGIONAL TRANSIT BENEFITS OF CONNECT NWA



	Bentonville		Fayetteville		Rogers		Springdale		Region	
	Existing	Future	Existing	Future	Existing	Future	Existing	Future	Existing	Future
System Characteristics										
Transit Routes #	1	6	15	15	3	9	4	6	19	29
Peak Buses #	1	12	27	39	4	21	5	15	32	75
Service Coverage										
# People & Jobs 1/4 mile Walkshed	31,823	51,328	73,230	81,553	27,082	43,687	47,454	59,007	179,589	235,575
Frequent Service Coverage (30 minutes or better)										
# People & Jobs 1/4 mile Walkshed	0	36,466	59,459	67,439	0	23,450	0	37,038	59,459	164,393
Travel Time to Mobility Hubs										
Travel Time Zone 60 #	61,000	125,827	80,646	129,189	23,859	113,578	68,727	155,710	234,233	524,305
45 #	44,247	81,604	47,290	76,793	14,787	45,767	45,507	98,931	151,831	303,094
30 #	33,580	41,908	24,886	37,189	8,042	12,860	23,562	38,614	90,069	130,571
15 #	13,009	14,739	6,408	6,474	2,533	2,583	8,686	9,916	30,636	33,712

REGIONAL SERVICE STANDARDS

As the NWA area continues to grow, it is important that transit providers understand how to allocate resources effectively, and which markets will utilize the provided services. The regional service standards offer a unique set of service provision types, technology standards, and system designs for the NWA region to use for ongoing operation, expansion and the implementation of transit services. They are intended to serve as a living tool that both compliments Connect NWA and stands on its own. Regional Service Standards will serve as both an internal and external resource that will explain how and why transit is delivered in NWA.

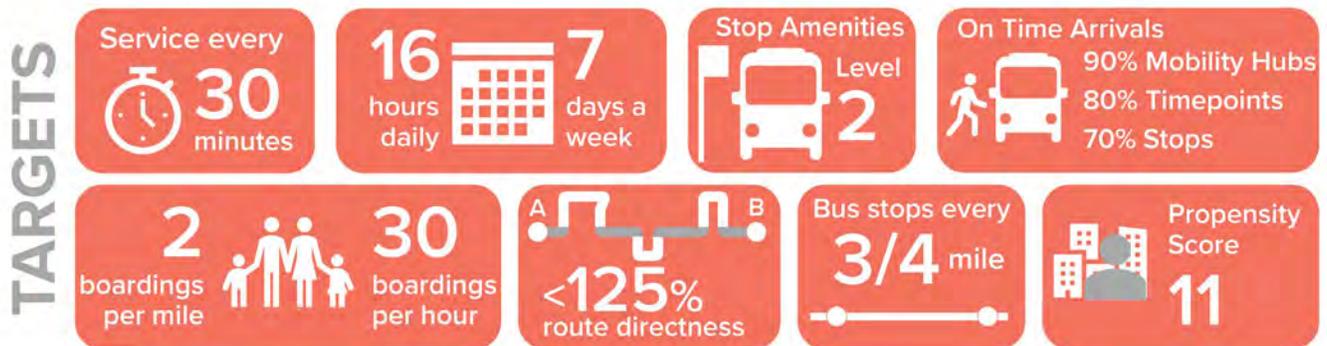
Regional Service Standards

Regional Connectors are a fixed route transit service that provide service from city to city along a major arterial at high frequencies with limited stops. These routes cover key areas and give users increased accessibility and connectivity to multiple urban areas in a region.



Frequent Service

Fixed route service that has demand for more frequent service due to destinations and/or ridership. Accordingly, frequent fixed route service refers to transit that stays within denser, more urban areas where transit demand tends to be concentrated.



Coverage Service

Coverage service refers to transit with a set route alignment, designated stops, and a fixed operating schedule.



Mobility Zones

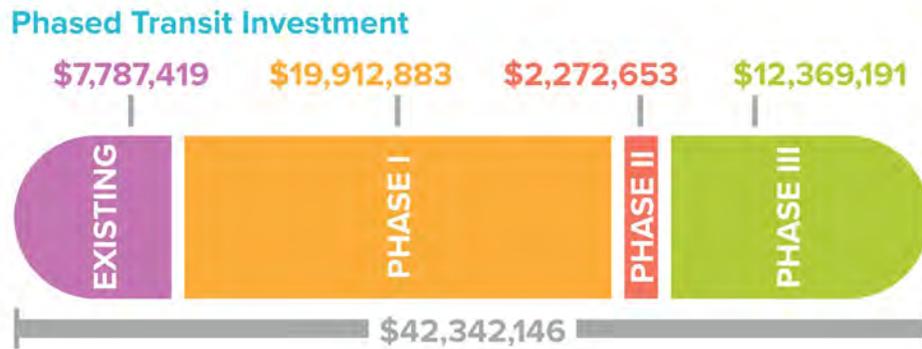
Mobility zones are designated areas with demand response service available to help provide first-last mile solutions for system users. Mobility zones are coverage areas set in the place of unproductive fixed routes/deviations. This allows for the provider to maintain market coverage in an efficient, cost effective way.



IMPLEMENTATION & FUNDING

Connect NWA recommendations take the shape of a phased implementation plan derived from previous technical analyses, proven transit concepts, and public and staff input. This implementation plan will work in tandem with the Regional Service Standards to successfully and sustainably implement the recommendations that will create high quality transit throughout the entire NWA region. The implementation plan is separated into three phases:

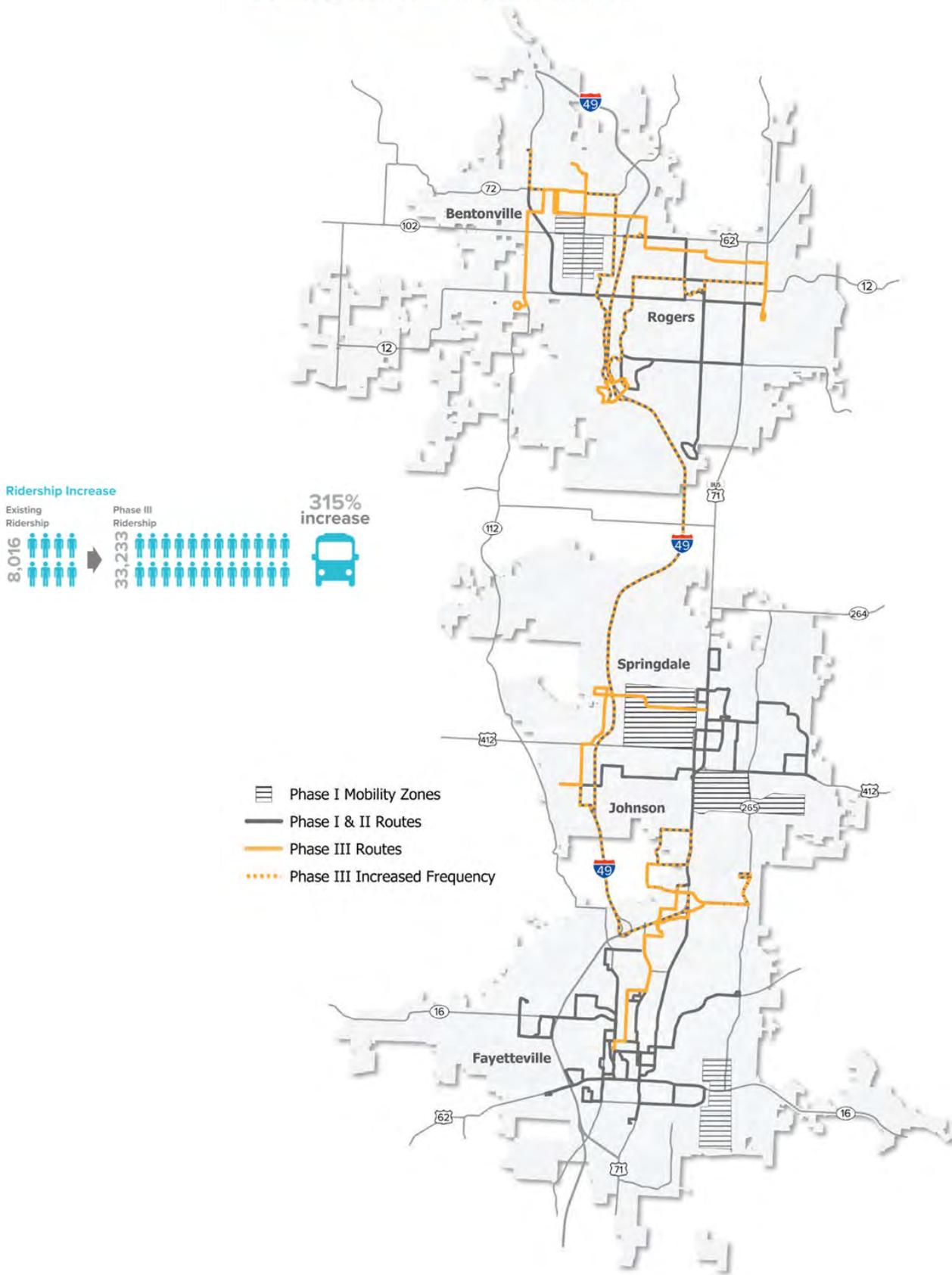
- › Phase I: 1 to 2 years
- › Phase II: 2 to 5 years
- › Phase III: 5 to 10 years



Each phase is further prioritized to provide a more detailed structure for future implementation. Three main components informed the prioritization and ensured that the process supports the vision of this plan by connecting people and saving them time.

- **Transit Propensity:** Where will transit work? Transit propensity represents the sum of population and employment within a quarter mile route buffer of each route.
- **Transit Needs:** Who depends on Transit? Transit needs population represents the sum of Transit-Dependent Population and Target Transit Rider Population totals (refer to Chapter 2) found within the same quarter mile route buffer used to capture transit propensity.
- **Ridership:** How many people will be using the service on an average weekday? Ridership estimates were generated through the Federal Transit Administration (FTA) Simplified Trips On Project Software (STOPS) modeling, which compares ridership generated for base (existing routes) and future (implemented route recommendations) scenarios.

Connect NWA Full Implementation



TRANSPORTATION ALTERNATIVES ANALYSIS

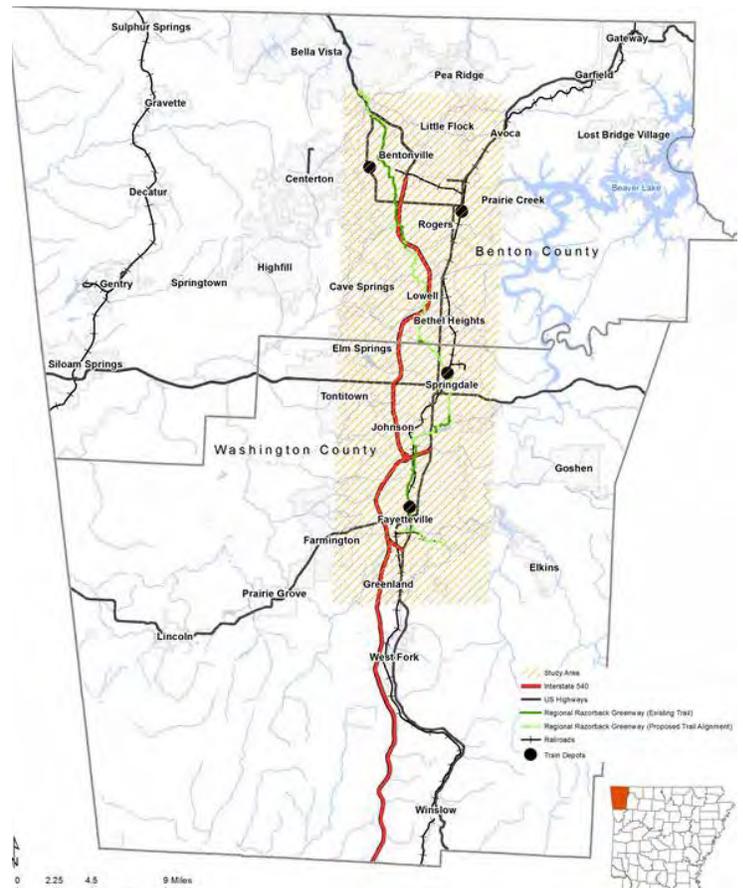
For more than a decade, various groups have promoted interest in a rail transit project that would serve the north-south corridor in Washington and Benton Counties in Northwest Arkansas. The advocacy efforts captured the interest of public officials and private individuals and interests. The concept has been studied or addressed in no fewer than seven planning studies and reports since 2004. These are:

1. The Potential for a NWA Regional Light Rail System. Beta Rubicon, 2004
2. Interstate 540 Improvement Study. Parsons Transportation Group, 2006
3. NWA Rail: Visioning Rail Transit in Northwest Arkansas. UA Community Design Center, 2007
4. Northwest Arkansas Razorback Regional Greenway TIGER II Grant Application. NWARPC, 2010
5. Northwest Arkansas Transit Development Plan. Connetics, 2010
6. Northwest Arkansas Western Beltway Feasibility Study. Parsons Brinkerhoff, 2011
7. Northwest Arkansas Regional Development Strategy. Market Street, 2011

NWARPC responded to the widespread interest by obtaining special Federal funding to conduct an Alternatives Analysis Study in the 40-mile north-south urban corridor. To the greatest extent possible, the Study approach followed the planning guidelines of the Federal Transit Administration (FTA), especially those that apply to New Starts and Major Capital Investment funding.

A significant difference between the Federal planning guidelines and previous studies is that the Alternatives Analysis Study approach required a location-neutral and mode-neutral examination of the options within the broad category of fixed-guideway transit. The selection of alternative locations and the modal (vehicle) technologies were studied and included a review and discussion regarding a common misconception that light rail vehicles can operate on freight rail lines. In the current regulatory environment in the U.S. this alternative is not permitted.

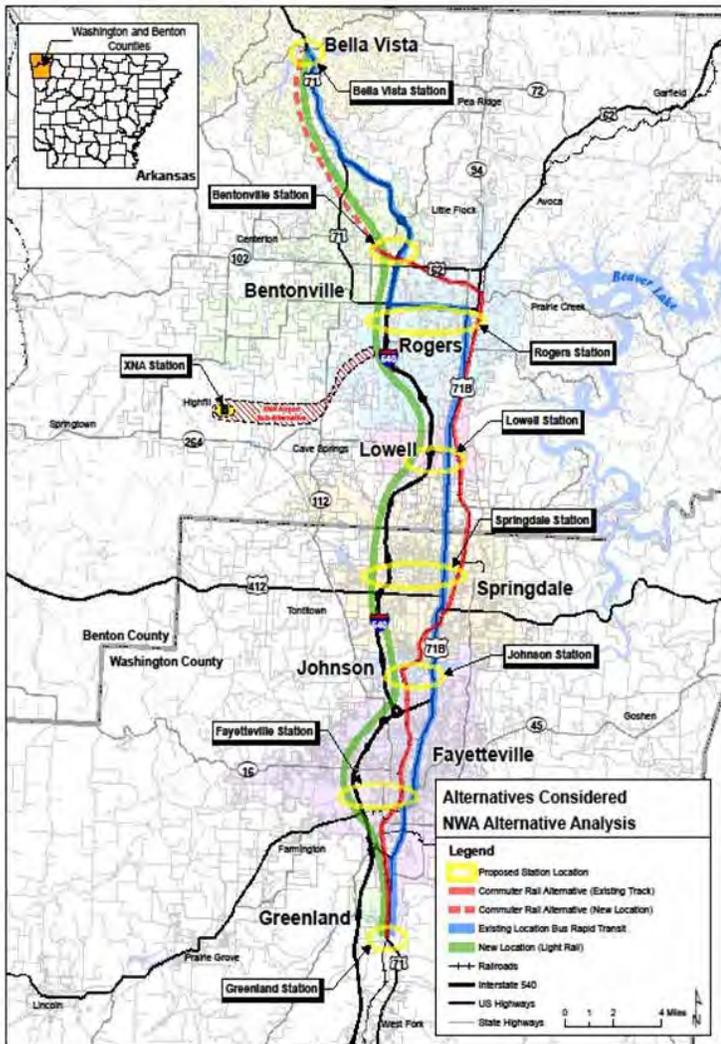
The Study was completed in fall 2014 and NWARPC accepted the final Alternatives Analysis Study (Map 11.1). The NWARPC members accepted the Alternatives Analysis Study with the understanding that none of the alternatives considered are financially feasible at this time based on low ridership forecasts, high capital costs, and not meeting the FTA threshold to receive Federal funding. The NWARPC also considered the “Path Forward” to focus on a potential future commuter rail corridor following the Arkansas and Missouri (A&M) Railroad as having the most potential for a future fixed-guideway system. The alternatives studied were Light Rail (new location in I-49 corridor), Commuter Rail (in A&M Railroad Corridor), and Bus Rapid Transit on Hwy. 71B.



Map 11.1 – Alternatives Analysis Study Area

Key Findings:

- Alternatives studied are not financially feasible. None of the alternatives considered are financially feasible at this time based on low ridership forecasts, high capital costs, and not meeting the FTA threshold to receive Federal funding.
- High Capital Costs. New location Light Rail: \$2.286 billion; Commuter Rail: \$664.0 million; Bus Rapid Transit: \$97.8 million.
- Low Ridership Forecast. New location Light Rail: 356 daily riders; Commuter Rail: 1,368 daily riders; Bus Rapid Transit: 378 daily riders.
- New “double track” is recommended for Commuter Rail within the A&M Corridor. Light rail vehicles cannot operate on active freight rail lines. However, more modern, higher performing, and quieter commuter vehicles such as diesel multiple units (DMU’s) are a possible alternative adjacent to freight rail lines on new track (double track).
- The Locally Preferred Alternative (LPA) is the Commuter Rail on the right-of-way of the A&M Railroad, along with a new location segment from Bentonville to Bella Vista.



The Study pointed out that without a transit component included in the NWARPC Travel Demand Model, the Study was restricted in modeling transit ridership. NWARPC worked throughout the 2015 year to update the travel demand model to include the transit component into the model in order to meet recommendations of incorporating new transit modes (Map 11.2).

The Path Forward:

- Enhance and support existing and emerging transit markets. Northwest Arkansas communities should work with NWARPC to improve the region’s existing public transit service and to get “Transit Ready.”
 - Plan for complete, comprehensive, and coordinated transit service (existing and potential new modes). Whether Federal funding is sought or not, a successful fixed guideway project must be developed side by side with a sound bus service expansion plan.
 - Promote transit-supportive development policies. Transit-supportive development policies may go a long way toward making a project eligible for Federal funding for New Starts projects. Even if Federal funds are not received or not sought, the affected municipalities in NWA should work to enhance and develop a comprehensive set of zoning and public finance policies to promote walkable, sustainable neighborhoods in the corridor.
- The complete report including the technical memorandum may be found [at this link](#).

Map 11.2 - Alternatives Considered in the Alternatives Analysis Study



CHAPTER 12. MULTIMODAL FREIGHT

Both ARDOT and MoDOT have developed state freight plans that meet federal requirements outlined in MAP-21, and continued in the FAST Act. Due to the small size of the MPA in Missouri, discussion in this chapter will use the Arkansas State Freight Plan. The Missouri State Freight Plan can be found at <https://www.modot.org/freight-plan>.

Multimodal freight or shipping, with regards to the MTP, refers to intermodal, trucking, rail and air shipment modes. Several MTP goals and objectives support investment in multimodal freight – **Implement strategies that help reduce fatality and serious injury crash rates for all modes; Increase transportation mobility and accessibility for both persons and freight, thus promoting economic vitality in the region; Support an integrated system with efficient connections between transportation modes; Enhance commerce; and Promote improvements that facilitate the efficient movement of freight and enhance regional and global competitiveness.**

NATIONAL MULTIMODAL FREIGHT POLICY

The U.S. DOT developed the National Freight Strategic Plan (NFSP) with vision and goals for the nation's multimodal freight system and to define strategies to achieve those goals. The NFSP is used to guide national freight policy, programs, initiatives, and investments. The Plan also is used to inform state freight plans and identify freight data and research needs.

According to the NFSP website, <https://www.transportation.gov/freight/NFSP/fullreport>, Strategic Goals include:

- SAFETY: Improve the safety, security, and resilience of the national freight system.
- INFRASTRUCTURE: Modernize freight infrastructure and operations to grow the economy, increase competitiveness, and improve quality of life.
- INNOVATION: Prepare for the future by supporting the development of data, technologies, and workforce capabilities that improve freight system performance.

INTERMODAL TRANSPORT

Intermodal transportation is the transfer of products involving multiple modes of transportation – truck, railroad or ocean carrier. Intermodal, freight, rail and air transportation are all modes of transportation that deserve continued and expanded investment in terms of Federal, State and local resources.

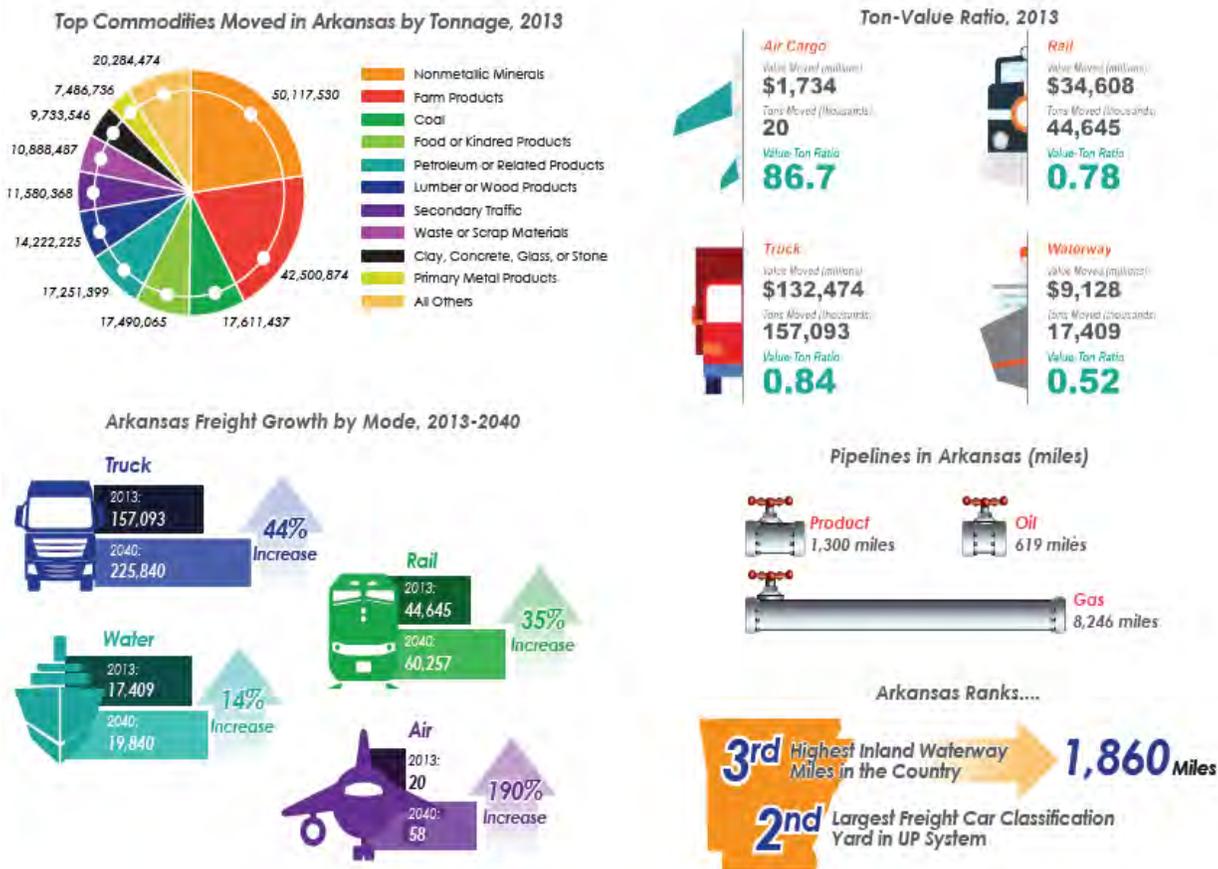
- The trucking industry is facing increasing and significant road congestion, which has prompted some carriers to offer intermodal service.
- Diverting traffic from the highway to the railway may be a solution to the enormous cost of adding highway capacity.
- Shipper demands for capacity and trucker productivity and cost issues have combined to move most of the larger

trucking fleets towards offering an intermodal service.

- Intermodal trucks and rails are offering dozens of new “corridors” running into shorter and shorter lengths of haul.
- Nearly 25 million containers and trailers are moved using intermodal transportation every year. This is due to the fact that intermodal combines the best abilities of different transportation modes to deliver service, savings and solutions to shippers. (Source: Intermodal Association of North America, <http://www.intermodal.org>)
- By working together, trucking companies, ocean steamship lines, and railroads are providing a cost-effective, reliable, efficient, safe and environmentally friendly way to move freight.

Recognizing that the use of intermodal transportation in the region will most likely continue to rise, local and State officials must strive to ensure that transportation infrastructure will accommodate this growth.

Arkansas Freight At-a-Glance



Source: Arkansas State Freight Plan
https://www.arkansashighways.com/Trans_Plan_Policy/freight_plan/ArkStateFreightPlan_ExecSum%20with%20state%20map.pdf

MOTOR FREIGHT

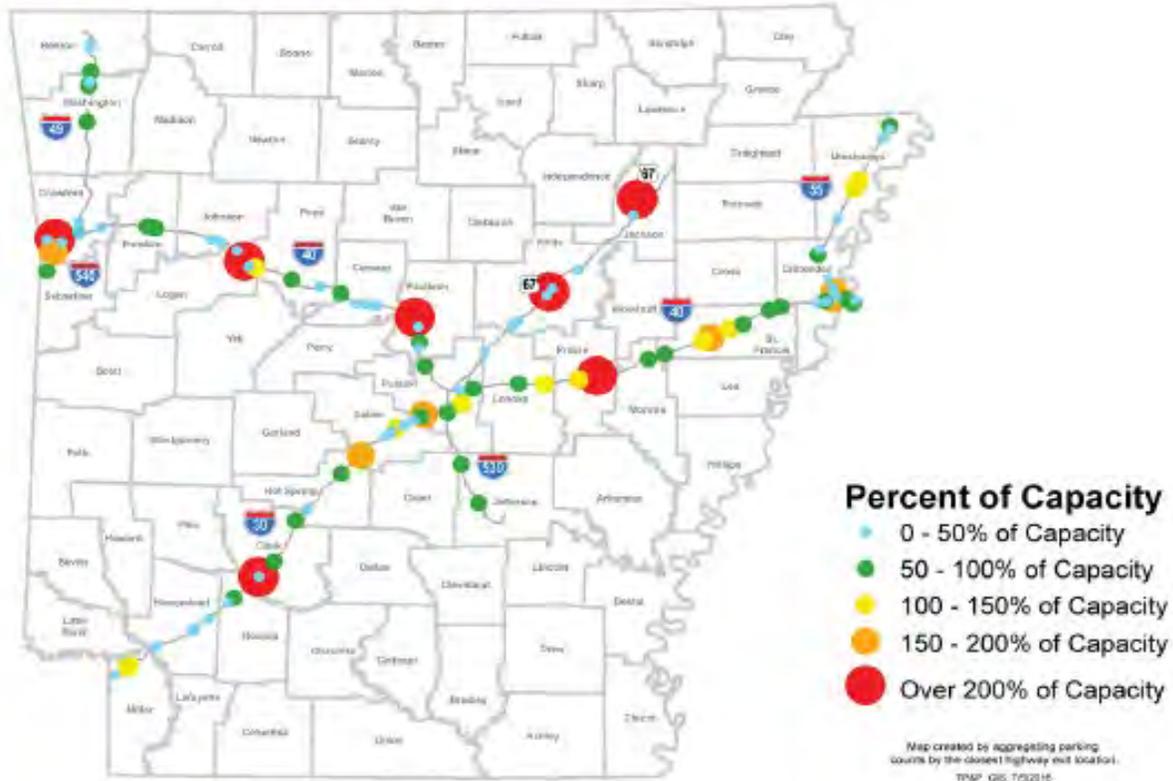
A survey conducted by the American Transportation Research Institute (ATRI) of the trucking industry in September/October 2020 to identify the top issues of concern for industry stakeholders shows that the resurgence of freight demand in 2020, due in part by the coronavirus pandemic, placed Driver Shortage at the top of the 10 Trucking Industry Issues. Closely related is Driver Compensation, which ranked as the number two industry issue. Truck Parking is the third highest ranking issue of concern. The Federal Motor Carrier Safety Administration’s (FMCSA’s) Compliance, Safety, Accountability (CSA) program is the fourth highest rank, with Insurance Cost/Availability rounding out the top five issues. An issue that fell just outside the Top 10 as the 11th ranked issue is Driver Distraction. According to the latest data from the National Highway Traffic Safety Administration (NHTSA) “8% of fatal crashes, 15% of injury crashes, and

14% of all police-reported motor vehicle crashes in 2018 were reported as distraction-affected crashes”.

(Source: *Critical Issues in the Trucking Industry – 2020*, by the American Transportation Research Institute [ATRI] <https://truckingresearch.org/wp-content/uploads/2020/10/ATRI-Top-Industry-Issues-2020.pdf>)

The Arkansas State Freight Plan found that there is a critical need for long-term parking along major freight corridors. Lack of parking impacts the efficiency of the movement of goods, contributes to undesirable truck parking activities, or drivers operating beyond their maximum hours of service.

Overcrowding of Truck Parking Facilities By Exit, 2015



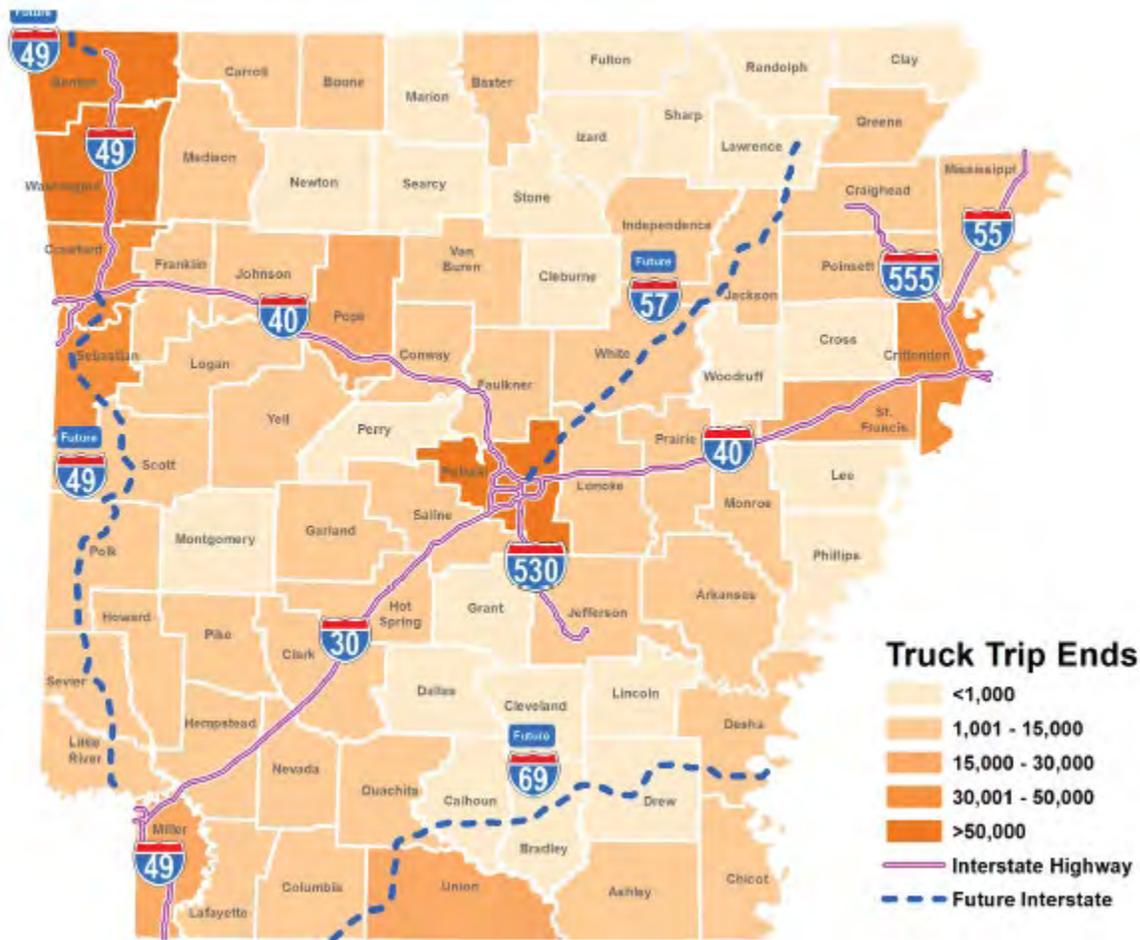
Source: Arkansas State Freight Plan

Truck size and weight is another issue that is of concern to the trucking industry and highway officials as well as other drivers. On June 5, 2015 the DOT released a series of technical reports for peer review and public comment as a step toward completion of the MAP-21/FAST Act Comprehensive Truck Size and Weight Limits Study, examining the impacts of increasing current federal truck size and weight limits. The DOT reported that the data limitations were so profound that no changes to existing truck size and weight limits should be made at this time. The study noted that more than 4,800 bridges would need to be strengthened or replaced because of added stress, at a cost to taxpayers of more than \$1.1 billion. (Source: U.S. Department of Transportation). Arkansas has a current allowable limit of 28’ for twin trailers, coinciding with Federal laws that have been in place since 1982. The Federal weight limit on national highways is currently 80,000 pounds.

According to the Arkansas State Freight Plan:

- Of the five modes of freight transportation in Arkansas, commercial trucking moves the greatest tonnage;
- NWA (including Crawford and Sebastian Counties) generates 29% of truck traffic in Arkansas;
- The Interstates are the only roadways in Arkansas that serve more than 5,000 trucks per day.
- The National Highway Freight Network (NHFN) was established under the FAST Act to strategically direct Federal freight resources. In Arkansas, the NHFN includes all Interstate Highways, and other important freight routes. 150 miles of Critical Rural Freight Corridors (CRFCs) and 75 miles of Critical Urban Freight Corridors (CUFCs) are available to allow expanded use of Federal Freight funding.
- Congestion along Arkansas roadways is most significant in metropolitan areas as trucks encounter commuter traffic. There is no recurring congestion on Interstates in Arkansas outside of urban areas.

Trucks Generated in Arkansas Counties, 2015



Source: Arkansas State Freight Plan

According to the 2017 Annual Economic Survey there were 109 general freight trucking establishments in the Fayetteville-Springdale-Rogers AR-MO Metro area with 9,253 employees. NWA is the home to several major trucking companies such as Comstar Enterprises, J.B. Hunt, P.A.M Transportation Services, and Willis Shaw Express. Companies with large truck fleets include Wal-Mart, Tyson Foods, George’s Inc., and Simmons Foods. It appears that the demand for trucking will increase by 50 percent over the next 20 years (Arkansas State Freight Plan) which contributes to the economy of Northwest Arkansas. Because trucking is the most heavily used mode of transporting goods, the roadways act as the primary element of freight infrastructure. In turn, roadways with high truck volumes are subject to increased levels of deterioration.



The ability of fuel taxes to adequately fund transportation improvements has been declining due to improvements in fuel economy and stagnant fuel tax rates. As the transportation infrastructure ages and repairs and/or new construction become more costly, it is necessary to find additional funding to make up for shortfalls. It has been suggested that an increase in the fuel tax is the best way to ensure the transportation system is adequately funded. Additionally, it may be necessary to prioritize where transportation funding is spent. Some have suggested the creation of a new funding program to focus Federal resources on truck bottlenecks on major freight routes.

Going forward, enhancing the link between freight planning and land use will help identify and prioritize freight issues and needs, and provide for the ability to recommend physical improvements to infrastructure and identify potential freight-related development locations. Planning for the impacts of increased freight volumes in the future can help reduce the negative impacts of freight (increased traffic, noise, and pollution) while promoting economic and operational efficiencies.

ELECTRIC TRUCKS

Currently, less than 1 percent of fleet vehicles is electric, but that number is expected to grow to 12 percent by 2030. All-electric heavy-duty big rigs, semi-trucks, box trucks, and delivery vans are among the types of trucks being built and tested on interstate, state, and local roadways. Major obstacles facing the industry are ones of scale, price points and battery technology. There's also the challenge of building an interstate network of electric vehicle charging stations capable of keeping the next generation of long-haul trucks on the road.

(Source: <https://www.greenbiz.com/article/8-electric-truck-and-van-companies-watch-2020>)

According to Target Transportation, the shift to renewable-powered vehicles in the coming future has the freight industry and many trucking manufacturers focusing on a future-ready trucking system that uses electric solutions to speed up the long-haul freight management industry. The new-generation of fully-electric truck-types aims to reduce all the market vulnerabilities, i.e., petroleum-based fuels, and bring in more stability, thereby shaving operating costs and curbing emissions. With fewer moving parts, they are also easier to maintain.

(Source: <https://targettrans.com/post/electric-semi-truck-companies-is-the-future/>)

Regional deliveries using medium-and heavy-duty trucks are expected to grow rapidly in the future due in part to a dramatic increase in e-commerce. With a defined daily route, and trucks that return to the same place every night to recharge, electric trucks make sense. There is a sustainable e-commerce growth trend that the industry has been anticipating. However, equipping central depot facilities to accommodate commercial charging needs is a challenge that will need to be overcome.

The electrification of trucking appears to be rolling out in three phases, beginning with medium-duty box trucks and vans, followed by heavy-duty semis used for regional hauling. Long haul, over-the-road trucks traveling more than 600 miles a day will probably be the last to see electrification, due to fuel cells that are still in development.

About two million of the 15.5 million trucks operating in the United States are semis, or tractor-trailers. They're replaced at the rate of 200,000 to 300,000 a year. Still, the market for electric heavy-duty trucks is expected to be less than 4 percent of all trucks sold until 2025, according to the global information firm IHS Markit. In NWA, interstate, State and local roadways will continue to play a big part in the movement of goods via semis, and will require maintenance and improvements for the foreseeable future.

(Source: NYTimes <https://www.nytimes.com/2020/03/19/business/electric-semi-trucks-big-rigs.html>)

AUTONOMOUS TRUCKS

Companies that specialize in moving goods across the country are working to bring down shipping costs by reducing inefficiencies in the system, and automated trucks will be a crucial part of their success. Autonomous, or self-driving, trucks are currently being developed and tested. The trucks use cameras and sensors, plus lidar and radar, that provide vast amounts of data, so the vehicle's computer software knows what's happening up to 3,000 feet up the road, and can react to emergencies 10 times faster than a typical human.

Some companies are concentrating on long-haul semis meant to operate without humans, with the goal to autonomously navigate traffic, and other surprises, on the roads, with routes up to 1,000+ miles. Other companies are

focused on last-mile delivery and are using smaller self-driving minivans to move packages to consumers. The idea with some of these companies is to implement the self-driving technology into vehicles and parts produced by other manufacturers.

Regardless of whether companies are building their own long-haul or last mile fleets, or developing autonomous technology, the truck freight industry is changing. The technology will hopefully make trucking cheaper, safer, faster, more fuel-efficient, and more environmentally friendly.

(Source: <https://www.vox.com/recode/2020/7/1/21308539/self-driving-autonomous-trucks-ups-freight-network>)

RAIL

Unlike most other modes of transportation, freight railroads operate over infrastructure that is built and maintained with private funds. These private investments help sustain jobs and ensure the industry can meet growing demand to move more of what the nation and world needs. Freight railroads spend nearly \$29 billion annually to maintain and add capacity to the nationwide freight rail network. The impact of freight rail investments has helped provide a safe, efficient, affordable, and reliable means by which U.S. products can travel to market anywhere in the county and, through ports, anywhere around the globe.

The U.S. freight network consists of nearly 140,000 rail miles operated by more than 600 railroads. While these railroads typically own their own tracks and locomotives, they share a fleet of approximately 1.5 million cars. Moving goods along the freight rail network involves a process called interchange, which means transferring cars from one railroad to another. The movement of shipping containers and truck trailers by rail has been the fastest growing rail traffic segment over the past 25 years.

Several kinds of railroads share the network:

- **Class I railroads** – Operate in 44 states and the District of Columbia and concentrate largely on long-haul, high density intercity traffic. Class I railroads are the largest railroads based on operating revenue. The seven Class I railroads include BNSF Railway Company, Canadian Pacific National Railway (Grand Trunk corporation), Canadian Pacific (Soo Line Corporation), CSX Transportation, Kansas City Southern Railway Co., Norfolk Southern Combined Railroad Subsidiaries, and Union Pacific Railroad Co. These railroads account for 68 percent of the industry's mileage, 88 percent of its employees, and 94 percent of its freight revenue.
- **Short line and regional rail roads** – Range in size from small operators handling a few carloads a month to multi-state operators. The short line and regional railroads account for 31 percent of U.S. freight rail mileage and 10 percent of employees, operate in every U.S. state except Hawaii and often feed traffic to Class I railroads and receive traffic from Class I railroads for final delivery.
- **Switching and terminal railroads** – Usually perform pick-up and delivery services within a port or industrial area, or move traffic between other railroads.
- **Passenger railroads** – Typically operate over tracks owned by freight railroads. Approximately 70 percent of the miles traveled by Amtrak trains are on tracks owned by freight railroads. Additionally, each year hundreds of millions of commuter trips occur on commuter rail systems that operate, at least partially, over track or right-of-way owned by freight railroads.

Of particular importance to railroad operators, the public, and local, State and Federal officials alike, are the approximately 210,000 grade crossings in the nation. All these players are working together to improve grade crossing safety and promote safe driver and pedestrian behavior. The Federal Section 130 program, which will allocate \$245 million in Federal funds for FFY 2020 to states for installing new active warning devices, upgrading existing devices, and improving grade crossing surfaces, has helped prevent tens of thousands of at grade crossing related injuries and fatalities. The train accident rate in 2019 was down 30 percent from 2000 and the grade crossing collision rate in 2019 was down 32 percent from 2000. NWARPC has awarded funding to two STBGP-GT 200K projects that address improving rail crossings through gate installation.

Sources:

Association of American Railroads <https://www.aar.org>

Federal Rail Administration <https://dotcms.fra.dot.gov/rail-network-development/freight-rail-overview>

FHWA <https://safety.fhwa.dot.gov/hsip/xings/>

RAIL IN ARKANSAS

According to the Arkansas State Freight Plan, there are approximately 2,662 miles of active rail lines in the state. Union Pacific Railroad owns about half of these miles. Burlington Northern Sante Fe (BNSF) and Kansas City Southern owns another 356 miles. The remaining nearly 1,000 miles are owned by 23 Class III or shortline railroads. The 2013 Arkansas State Rail Plan identified nearly 100 improvements for freight rail infrastructure, totaling \$1.5 billion. Additional freight improvement projects recommended in the State Rail Plan include over \$300 million in capacity enhancement, \$22 million in industrial access and economic development projects, \$70 million in intermodal and transloading improvements, and \$62 million in track upgrades and rehabilitation. Rail traffic is forecast to grow by 35 percent in Arkansas between 2013 and 2040. [Source ARDOT Publications.](#)

NORTHWEST ARKANSAS

The Northwest Arkansas region is served by two railroads: The Arkansas and Missouri Railroad (A&M) and the Kansas City Southern (KSC).

Kansas City Southern Railroad

KCS offers the foundational rail route between the industrial heartlands of the U.S. and Mexico and is just one interchange away from every major market in North America. It offers seamless transportation throughout North America and beyond through strategic partnerships with all Class 1 railroads, short line partners, ports, transload centers and intermodal ramps. The KCS operates along a route north and south of Kansas City, through Siloam Springs on the western edge of Benton County.

KCS ships by carload or intermodal:

- Carload
 - Shipping by carload is designed for those with heavy loads or a more flexible time schedule for delivery. With multiple types of equipment within the carload fleet such as boxcars, coil cars, gondolas or tank cars, any commodity ranging from agriculture to steel and anything in between can be shipped via carload.
 - Given carload's volume capacity and rail's energy efficiency, rail is one of the most environmentally efficient forms of transportation. On average, a single Class I U.S. freight train can haul one ton of freight 473 miles on just one gallon of fuel.
 - The volume capacity and energy efficiency of rail shipping equates to economical savings for carload shippers.
- Intermodal
 - As companies continue to manage the time vs. money equation as well as the complexities of domestic U.S., Mexico and cross-border transport, more and more shippers are converting to intermodal, taking advantage of the efficiency of container shipping by railroad.



- With intermodal facilities in both the U.S. and Mexico, along the International Intermodal Corridor, KCS provides an efficient transcontinental rail line from Mexico to the southeastern U.S., and beyond.

(Source: <http://www.kcsouthern.com/en-us/>)

Arkansas and Missouri Railroad

The A&M “was established in 1986 as a Class III Railroad operating a 150-mile route from Monett, Missouri to Fort Smith, Arkansas. A&M’s corporate headquarters is located in Springdale, Arkansas; major operations are based there and Fort Smith. The company provides freight service to customers along its route and excursion passenger service between Springdale and Van Buren/Fort Smith. A&M interchanges traffic with three Class I railroads: Burlington Northern Santa Fe (BNSF), Kansas City Southern (KCS), and the Union Pacific Railroad (UP), as well as the Fort Smith Railroad (FSR). All lines are rated at 286,000 lbs. and cleared for double-stack rail cars, and main lines feature continuous welded rail.

The A&M extends its customer reach through collaboration with other Class I and short line railroads across the United States, Canada and Mexico. The A&M enables seamless water-based intermodal options through A & M-served river ports in Van Buren and Fort Smith, Arkansas. Port operators there provide a variety of storage, inspection, transload, packaging and other logistics services.”

(Source: <http://amrailroad.com/freight>)



Image and map courtesy of Arkansas Missouri Railroad

<https://www.amrailroad.com/>



A&M train at Dickson St. Intersection in Fayetteville

AIR

The area is served by one national airport, Northwest Arkansas National Airport, located in Highfill, and five municipal airports located in Fayetteville, Springdale, Rogers, Bentonville and Siloam Springs.

The Northwest Arkansas National Airport (Airport)

In the late 1990s a regional airport was established. The Airport, located in Highfill, is the major commercial airport serving the region. The call letters assigned the Airport are XNA. The Airport opened for commercial passenger business on November 1, 1998. The geographic terrain where the Airport is located provides facilities for regional and larger jet aircraft to operate.

The Northwest Arkansas National Airport Authority (NWANAA) operates the airport. The Authority is comprised of five cities and two counties. The cities, Bentonville, Fayetteville, Rogers, Siloam Springs and Springdale, each appoint two members to the Board of Directors, as do Benton and Washington County. The Board of Directors mission is to build, operate and maintain the runways, structures, roadways, staff and finances required to operate a modern aviation facility.

The Authority is working with the Arkansas Department of Transportation to perform an Environmental Assessment for a connector road to the Northwest Arkansas National Airport (XNA). The scope of work also includes roadway and bridge design plans for the alignment, which will be determined through the Environmental Assessment process.

In an effort to expedite construction of the new connector road, ARDOT has agreed to manage the project development, construction, and add the future XNA connector to the State Highway system. The connector project is shown as part of the 2020 voter approved permanent half-cent sales tax “potential” project. [\(Source CAP Program\).](#)

The project is estimated to be approximately 4 miles long, connecting the Northwest Arkansas National Airport in Bentonville to the Springdale Northern Bypass (Highway 612) in Springdale.



Map and image courtesy of XNA website: <http://www.flyxna.com/>

IN SUMMARY, in order to attain the transportation system as envisioned in the MTP, it will be necessary for State and local officials, industry leaders, and citizens to work together to advance the goals and objectives of the MTP, such as:

- To increase transportation mobility and accessibility thereby promoting economic vitality in the region;
- To develop an integrated system with efficient connections between transportation modes;
- To enhance commerce; and
- To make improvements that facilitate the efficient movement of freight and enhances regional and global competitiveness.